

# DIC REPORT 2016

The DIC Group's Corporate Profile & Sustainability Report



# Color & Comfort

## Innovation through Compounding



### DIC brings innovation to society through its core compounding technologies

Building on fundamental pigment and resin dispersion and compounding technologies realized through the production of printing inks, DIC has succeeded in combining materials with different properties and performance characteristics to develop groundbreaking products and create new value. DIC's mainstay product groups, which include printing inks, polyphenylene sulfide (PPS) compounds and liquid crystal (LC) materials, are the result of innovations made possible by its compounding technologies.

Going forward, the DIC Group will accelerate innovation on a global scale by capitalizing on its ability to compound dissimilar materials and create new value to transform its prowess in wide-ranging technological domains into significant competitive advantages.

## Making it Colorful



### DIC helps make life colorful

Established in 1908 as a manufacturer of printing inks, DIC has built on its core organic pigments and synthetic resins technologies to develop an extensive range of materials and products and transform itself into a global powerhouse.

Today, DIC provides not only printing inks and colorants but also a variety of other products and services that deliver "color" and "comfort," enriching and adding vibrancy to people's lives. The global DIC Group employs a broad spectrum of highly skilled individuals who are committed to working together while at the same time respecting diversity to create an ever-more-vivid tapestry of value.

### DIC draws on its expertise and comprehensive strengths to offer solutions

DIC strives to respond swiftly and flexibly to the needs of its customers and markets and, as a specialist in providing solutions that help resolve challenges, to provide value that exceeds expectations.

DIC defines itself as a team of specialists with proficiency in such diverse fields as printing inks, fine chemicals, polymers, compounds and application materials. The DIC Group will continue to leverage its competitive advantages, notably its specialized technologies and know-how, to offer specialty solutions that ensure it remains the partner of choice for its customers.

## Specialty Solutions



## Connecting the DIC Group and its Stakeholders DIC Group Communications Tools

The DIC Group uses a variety of tools to promote communication with its many stakeholders to encourage greater awareness of the Group's activities. More detailed sustainability-related information and data can be found on the DIC website.

### Printed/PDF-Form Publications

#### Reports on activities

DIC Report  
(summary version)



Report on sustainability initiatives and corporate profile (published annually) (Printed report)

DIC Report  
(complete version)



Report on sustainability initiatives and corporate profile (published annually) (PDF-form report)

Annual Report



Report on operations and financial condition (PDF-form report)

### DIC Website

#### Real-time information

DIC Global Website



 <http://www.dic-global.com/en/csr/>

Umbrella website providing information to the global public about the DIC Group and reports on its various activities; updated as necessary

## About this Report


The DIC Group publishes a combined corporate profile and sustainability report with the aim of presenting a clear, easy-to-understand picture of the Group and its sustainability initiatives. For DIC Report 2016, the Group published a simplified summary version (printed), which focuses on key highlights, and a more detailed complete version (PDF), which contains extensive quantitative data.

**DIC Report (Complete version) (PDF-form report)**

 <http://www.dic-global.com/en/csr/annual/>

Note: The designation "Asia-Pacific region" as used in this report refers to Asia—excluding Japan and Greater China—and Oceania.

## Links with the DIC Website

The  mark indicates that more detailed information and/or data can be found on the indicated page of the DIC website.

DIC website  <http://www.dic-global.com/en/>

### Scope of Reporting

In principle, this report provides information on DIC Corporation and consolidated DIC Group companies in Japan and overseas. For information on the scope of reporting for ESH-related initiatives, please visit the pertinent page of the DIC website.

 [http://www.dic-global.com/en/csr/pdf/dic\\_report\\_scope\\_en\\_2016.pdf](http://www.dic-global.com/en/csr/pdf/dic_report_scope_en_2016.pdf)

### Reporting Period

Fiscal year 2015 (January 1–December 31, 2015)

### Date of Publication

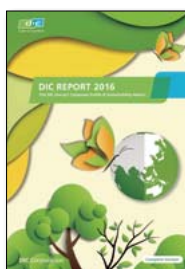
June 2016 (The next report is scheduled for publication in June 2017.)

### Guidelines Referenced

Guidelines referenced in the preparation of this report were ISO 26000, the International Organization for Standardization's standard for social responsibility, released in 2010; Japan's Responsible Care Code; and the Global Reporting Initiative's G4 Sustainability Reporting Guidelines.

# Contents

The DIC Group: A Global Powerhouse	3
A Message from the President	5
The DIC WAY, The DIC Group's Sustainability Program, Branding	7
New Medium-Term Management Plan: DIC108	11
Messages from Top Executives at Regional Headquarters	13
The DIC Group's Business Portfolio	16
<b>Special Feature</b>	
<b>Product Development for a Sustainable Society</b>	22
Inkjet Inks for Industrial and Office Printers	
SEPAREL® Hollow-Fiber Membranes and Membrane Modules	
Pigments for Cosmetics	
<b>Topic</b>	
Aquacure Inkjet Inks Technology Delivers the Positive Print Characteristics of a Water-Based Ink	31
Corporate Governance	32
Overview of Materiality Analysis	33
Sustainability Report	
Compliance	34
Risk Management	36
Information Security	39
Environment, Safety and Health (ESH)	40
Quality	75
Human Resources Management	77
Sustainable Procurement	85
Business Models that Respond to Social Imperatives	88
New Technology Development and Value Creation	91
Harmony with the Community and Social Contributions	95
Communication with Stakeholders	98
DIC Report 2016 and ISO 26000: A Comparison	102
DIC Report 2016 and the G4 Sustainability Reporting Guidelines: A Comparison	103
Third-Party Verification	106
Third-Party Opinion Regarding DIC Report 2016	107
DIC Group Milestones	108
Corporate Data	110



## Cover Design

The cover of this year's DIC Report is a paper craft artwork that communicates the appeal of the DIC Group's "Color & Comfort" brand slogan and evokes initiatives being undertaken to benefit the global environment, ecosystems and social systems, as well as to ensure sustainable growth for the Group.

# The DIC Group: A Global Powerhouse

## Corporate Data

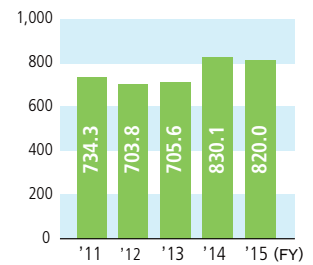
Registered name: **DIC Corporation**  
 Corporate headquarters: DIC Building, 7-20, Nihonbashi 3-chome, Chuo-ku, Tokyo 103-8233, Japan  
 Date of foundation: February 15, 1908  
 Date of incorporation: March 15, 1937  
 Paid-in capital: ¥96.6 billion  
 Number of employees: 20,264 (Nonconsolidated: 3,581)  
 Number of subsidiaries and affiliates: 174 (Domestic: 31, Overseas: 143)



Notes: 1. The consolidated results for fiscal year 2013 comprise the accounts for the nine months ended December 31, 2013, of DIC and its domestic subsidiaries but one and the 12 months ended December 31, 2013, of its overseas subsidiaries and one domestic subsidiary.  
 2. Corporate data is as of December 31, 2015. Net sales and operating income are for fiscal year 2015.

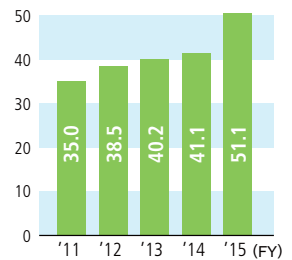
## Net Sales

(Billions of yen)



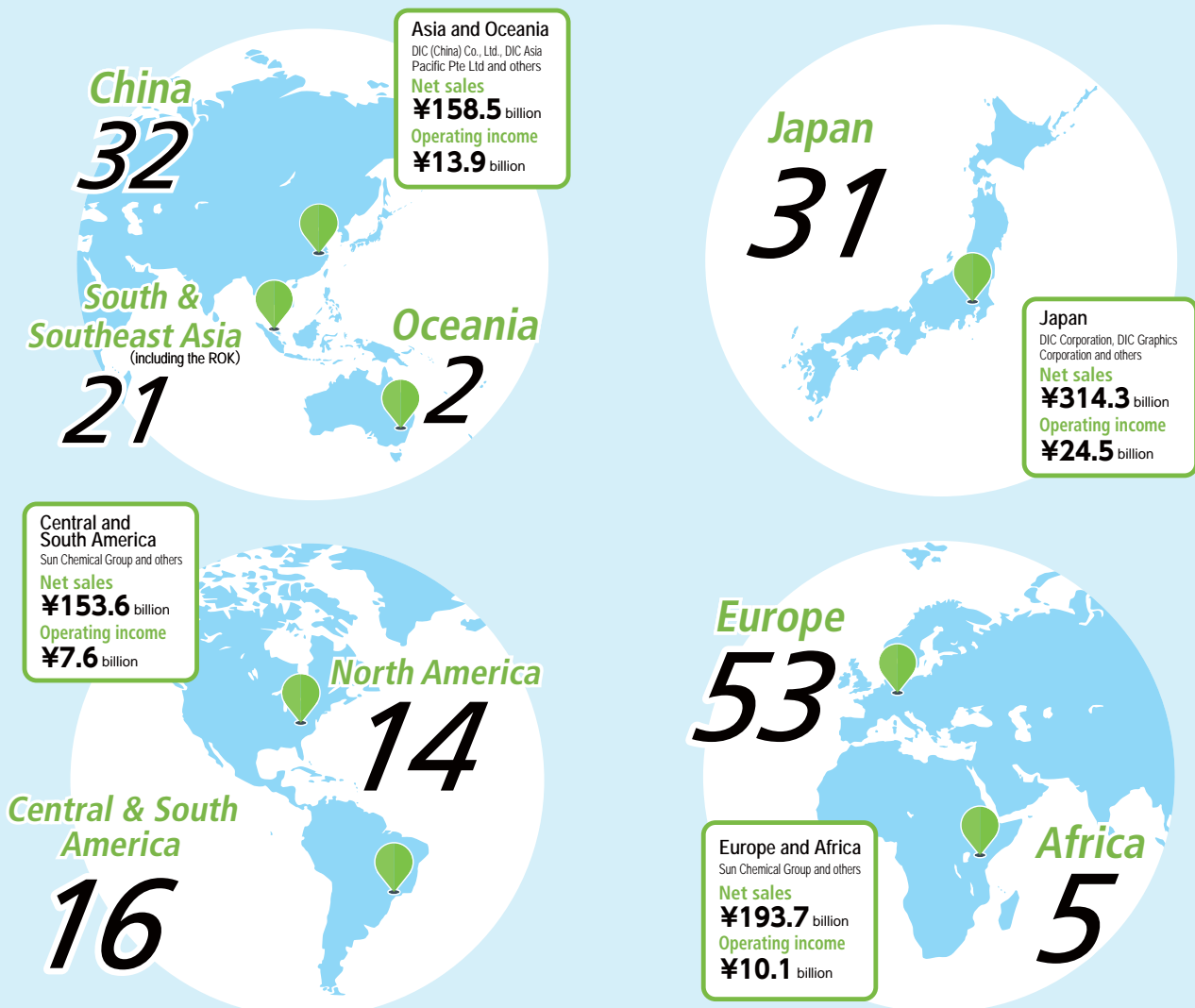
## Operating Income

(Billions of yen)

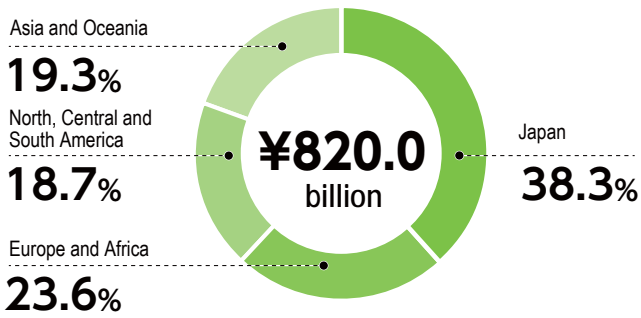


## Global Network

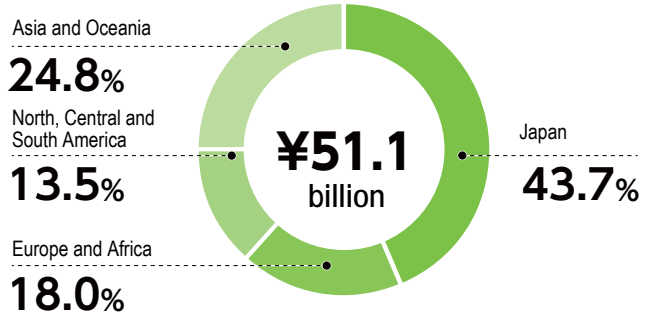
DIC has 174 companies in 64 countries and territories around the world.



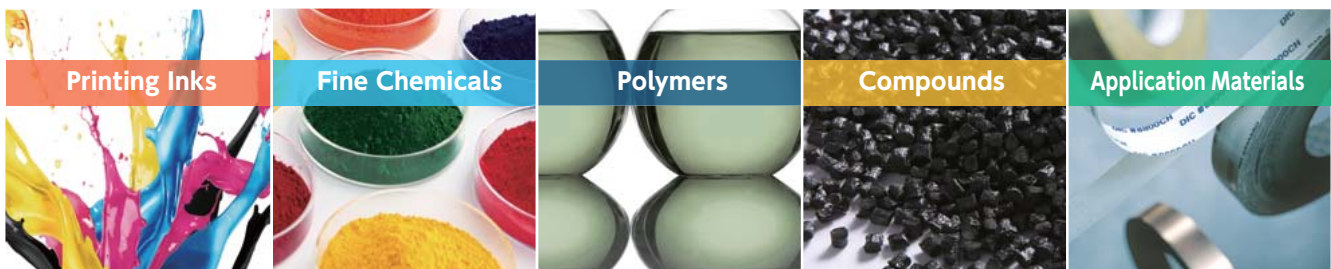
### Breakdown of Net Sales by Region



### Breakdown of Operating Income by Region



Note: Operating income as used here includes eliminations (approximately ¥4.9 billion). Accordingly, these percentages do not represent shares of reported operating income.



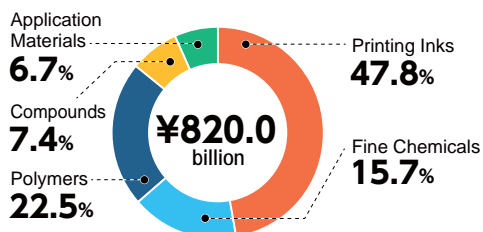
### Business Segments

The DIC Group has leveraged its organic pigments and synthetic resins, essential to the manufacture of printing inks, to build an extensive business portfolio.

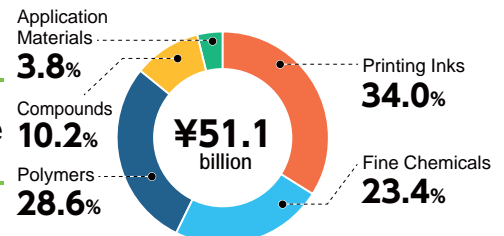
Printing Inks ▶ Page 17   Fine Chemicals ▶ Page 18   Polymers ▶ Page 19   Compounds ▶ Page 20   Application Materials ▶ Page 21

Segment	Net sales	Operating income
Printing Inks	¥412.6 billion	¥19.0 billion
Fine Chemicals	¥135.5 billion	¥13.1 billion
Polymers	¥194.6 billion	¥16.0 billion
Compounds	¥63.6 billion	¥5.7 billion
Application Materials	¥57.5 billion	¥2.1 billion

### Breakdown of Net Sales by Segment

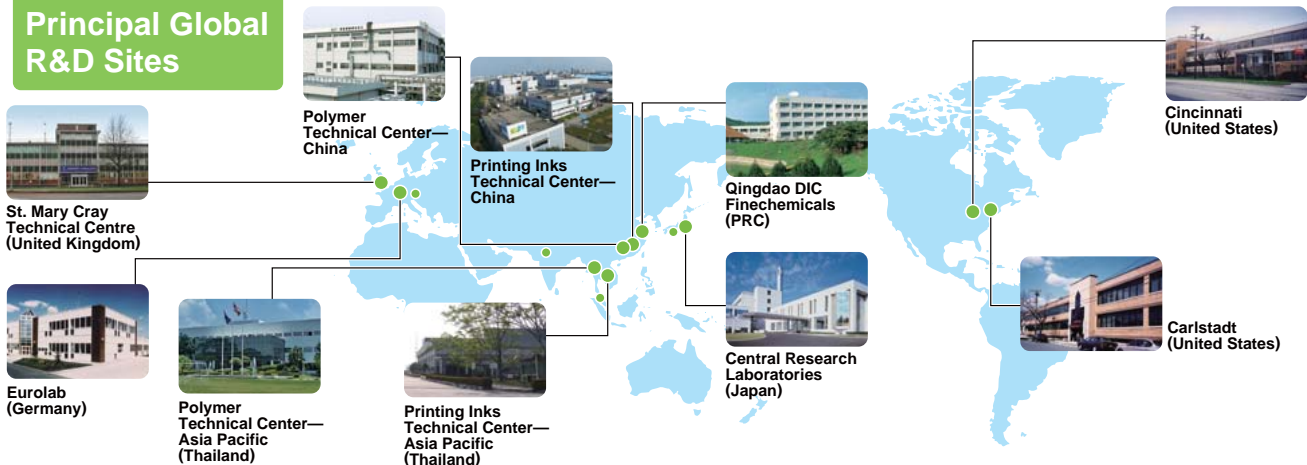


### Breakdown of Operating Income by Segment



Notes:  
1. Net sales and operating income as used here include intersegment transactions. For this reason, and because of the existence of transactions that are not attributable to reportable segments, these figures differ from reported net sales and operating income figures.  
2. Effective from January 1, 2016, DIC revised its segmentation. Figures for fiscal year 2015 have been restated to reflect the revised segmentation.

### Principal Global R&D Sites



# DIC108: Our New Medium-Term Management Plan Gets Under Way

Guided by our new brand slogan, “Color & Comfort,” we will continue working to achieve sustainable growth.

Representative Director,  
President and CEO  
DIC Corporation

**Yoshiyuki Nakanishi**



### ► The DIC Group Today

The DIC Group is a multinational organization comprising 174 companies in 64 countries and territories around the world. Across our global operations, we continue to promote development and innovation in a manner that contributes to sustainable growth for both our customers and society.

Today, the DIC Group operates in an environment characterized by rapid, all-encompassing change. Realignment in the chemicals sector is progressing at a bewildering rate. Against this backdrop, in fiscal year 2015 our consolidated net sales edged down to ¥820.0 billion, while operating income rose 24.3%, to ¥51.1 billion.

Under our previous medium-term management plan, DIC105, we made progress in implementing strategies aimed at establishing a foundation for sustainable growth, namely, in restructuring our printing inks businesses in North America and Europe and ensuring a more balanced financial position. However, in terms of our strategy to create next-generation businesses, challenges remain.

### ► DIC108

In fiscal year 2016, we kicked off DIC108, our new medium-term management plan. The vision for our future described in DIC108 is an extension of that outlined in DIC105, as are our overarching goals. We have positioned the new plan as the first phase of a growth scenario taking us up to fiscal year 2024, and will continue to press forward with efforts aimed at fulfilling our mission, “Through constant innovation, the DIC Group strives to create enhanced value and to contribute to sustainable development for its customers and society.”

DIC108 outlines a medium- to long-term road map that pays heed to global megatrends while organizing what must be done between now and fiscal year 2018—the next milestone in our evolution—into basic strategies for business (comprising four business initiatives), cash flow management and the establishment of a solid management infrastructure. Guided by these strategies, the employees and executives of the DIC Group pledge to work with the aim of ensuring that we achieve our targets for fiscal year 2024. Of particular note, we will work to expand businesses that will drive growth, including thin-film transistor (TFT) LCs and high-performance materials such as functional pigments. We will also actively pursue opportunities for strategic investments (mergers and acquisitions (M&As), etc.), to further strengthen our capabilities in areas in which we have particular expertise. In addition, we will work to create next-generation businesses by promoting open innovation, enabling us to make effective use of outside resources, which will further increase research efficiency.

### ► Ensuring Sustainable Growth

As part of our commitment to realizing sustainable growth, we classify our sustainability initiatives into four regional groupings: Japan, Greater China, the Asia-Pacific region and the Sun Chemical Group. In recent years, awareness of social imperatives pertaining to environment, society and governance (ESG)-related issues has grown. This is evidenced by developments such as the Paris Agreement, adopted in December 2015, and Japan's Corporate Governance Code, which entered into force in June 2015, to which we, as a major corporation, are working to respond. As an organization with global operations, we also recognize the importance of welcoming diversity, ensuring safety and promoting effective supply chain management to create a solid foundation for sustainable growth.

Having declared 11 DIC Group sustainability themes and formulated theme-specific approaches, we are currently promoting a variety of related initiatives aimed at creating next-generation businesses in such areas as electronics,

packaging, healthcare and low carbonization, through which we will endeavor to contribute to, among others, environmental protection, safety and security, and the realization of a smart society.

### ► The Future of the DIC Group

As a first step in formulating DIC108, we revisited our management concept, "The DIC WAY," which includes our mission and vision, and pondered the question of who we are and what role we are expected to play going forward. This process led us to articulate three key corporate values: "Making it Colorful," "Innovation through Compounding" and "Specialty Solutions." (For more information, please see page 1.) Having chosen a new brand slogan, "Color & Comfort," we pledge to work as one to promote sustainable growth. In these and all our efforts, we look forward to the ongoing support and guidance of our stakeholders.



(Above) Ceremony to celebrate the 40th anniversary of subsidiary Lidye Chemical Co., Ltd., in Taiwan (April 2015)  
(Below) Top management ESH audit at the Tokyo Plant (September 2015)

The DIC WAY was formulated to represent the DIC Group's fundamental management philosophy. As a first step in formulating DIC108, DIC revised The DIC WAY to better reflect social imperatives, to create a simple, clear message, in line with which the Group will continue to promote efforts aimed at enhancing corporate value and achieving sustainable growth.

## The DIC WAY

### ● Mission

Through constant innovation, the DIC Group strives to create enhanced value and to contribute to sustainable development for its customers and society.

### ● Vision

Color & Comfort by Chemistry

### ● Spirit

Drive, Integrity, Dedication, Collaboration, Harmony



The DIC WAY, which represents the fundamental management philosophy of the DIC Group, comprises three elements: Mission, Vision and Spirit.

- 
- **Mission:** Our Mission defines what the DIC Group ultimately aspires to be. Enhanced values we strive to create are “dignity and trust,” “customer satisfaction” and “harmony with society.”

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  - **Vision:** Our Vision defines the broad direction in which the DIC Group's business must advance to achieve our Mission. This is set based on our history, corporate culture and the competency instilled into DIC Group employees.

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  - **Spirit:** Our Spirit sets out the specific principles of conduct that DIC Group employees should always honor and which should serve as their guideposts in order to achieve our Mission, including encouraging our employees to think and judge matters on their own before taking action. In addition to our three founding precepts of “Drive,” “Integrity” and “Dedication,” in light of the demands of the times we have added “Collaboration” and “Harmony.”
-



# The DIC Group's Sustainability Program

In recent years, the need to achieve sustainability in a manner that takes into account, among others, the environment, ecosystems and socioeconomic issues, including global warming and the depletion of natural resources, has gained increased recognition worldwide. Today, the DIC Group promotes a variety of sustainability initiatives worldwide and works to maintain an accurate grasp of social imperatives pertaining to ESG-related issues.

The DIC Group launched its corporate social responsibility (CSR) program in fiscal year 2007, identifying multiple key themes as a framework for its efforts. Having further clarified the overall direction of its sustainability-related initiatives, effective from fiscal year 2014 the Group changed the designation used across its program from “CSR” to “sustainability,” which it feels is more appropriate for a globally active corporate entity. Corporations today are expected to operate in a manner that shows concern for the global environment and conforms with global business rules.

## Basic Sustainability Policy

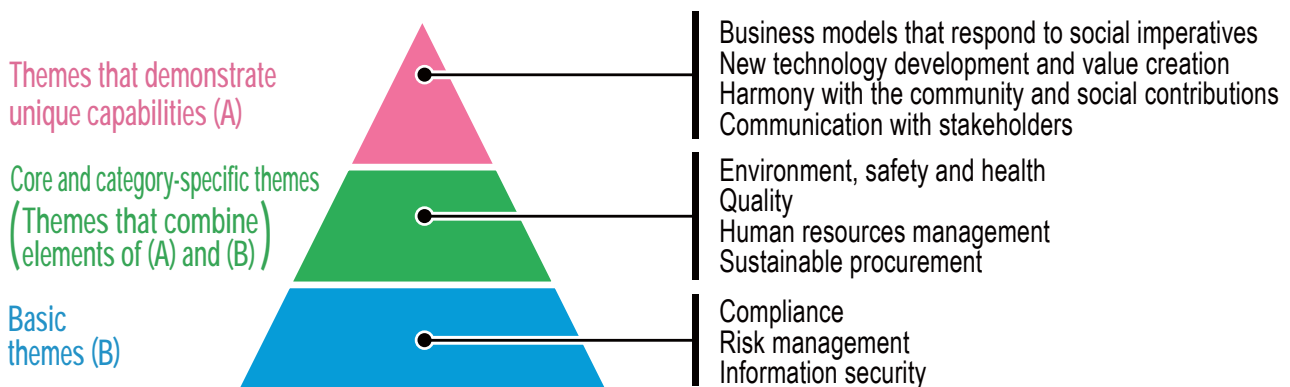
The DIC Group is dedicated to conducting its business while retaining a strong commitment to five key concepts: preserving safety and health, ensuring fair business practices and respect for human rights, maintaining harmony with the environment and advancing its protection, managing risks, and creating value for society through innovation.

DIC Group employees will continue working to deliver the value that its stakeholders—including its customers, suppliers, local communities, shareholders and investors, and employees—expect, showing ingenuity and a sense of responsibility. The Group itself will strive to remain an organization that contributes to sustainability for society and the global environment by capitalizing on its businesses to achieve unfaltering growth, thereby enhancing its own sustainability.

## Sustainability Framework and Themes

To foster concrete CSR measures, in fiscal year 2007 the DIC Group examined social imperatives, the activities of other companies and key relevant materials, including the results of a survey conducted by the *Keizai Dayukai* (Japan Association of Corporate Executives). Based on its findings, and to ensure the compatibility of such measures with its operations, corporate organization and functions, the Group identified 12 key themes as a framework for implementing its CSR program. Subsequently, the Group partially revised these themes in response to changes in the external environment and the progress of its efforts. Today, the Group's sustainability framework comprises 11 themes.

Having reorganized its quality assurance framework to further reinforce capabilities, effective from fiscal year 2016 the Group separated “quality,” formerly part of “Environment, safety, health and quality,” out as an independent theme and is promoting a variety of tailored initiatives. The Group has introduced a system whereby these are categorized as basic themes, themes that demonstrate unique capabilities and themes that combine elements of the previous two classifications, and clarified the positioning thereof. Each fiscal year, the Group formulates targets and activity plans for each of these themes.



## Expanding the Scope of Sustainability Initiatives

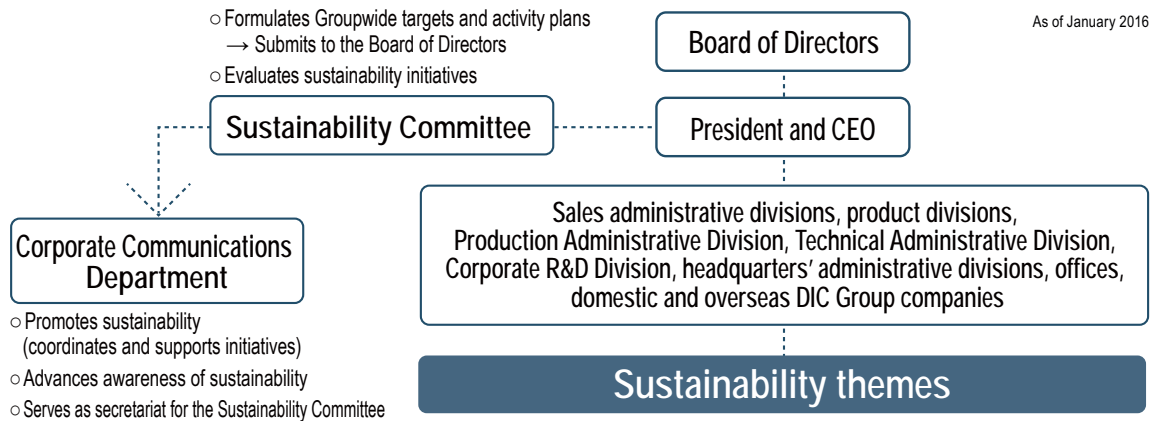
To guide its efforts to promote sustainability as an integral part of its business activities, the DIC Group formulates theme-specific medium-term targets in line with its basic sustainability policy and creates annual Group activity plans. The Marketing Division, the Technical Administrative Division and individual product divisions, sites and overseas and domestic DIC Group companies are then charged with pursuing effective sustainability programs by formulating their own annual activity plans, ensuring that the Group's basic sustainability policy and targets permeate their organizations and labor forces and linking sustainability activities to business targets.

## System for Promoting Sustainability

The DIC Group's system for promoting sustainability centers on the Sustainability Committee, which answers directly to the president and CEO and is tasked with reporting on the status of sustainability themes, as well as with proposing policies and programs for advancing sustainability and deliberating on related matters as a vital component of corporate management.

### Members of the Sustainability Committee

Executive officer in charge of the Finance and Accounting Division, Executive officer in charge of the Corporate Strategy Division, Executive officer in charge of the General Affairs and Legal Division, General Managers of product segments, General Manager of the Production Administrative Division, General Manager of the Technical Administrative Division, Executive officer in charge of the Purchasing and Logistics & Information Systems Division, CEOs of regional headquarters, Corporate auditors



## Ensuring DIC Remains a Globally Trusted Corporate Citizen with a Proud Reputation

### Leveraging its Position as a Global Manufacturer of Fine Chemicals to Support the UNGC

Seeking to fulfill its responsibilities as a member of the international community in a more proactive manner, in December 2010 the DIC Group pledged its support for the 10 principles put forth by the United Nations (UN), and became a signatory to the United Nations Global Compact (UNGC).

Inaugurated in 2000, the UNGC is a voluntary initiative for companies that seek to achieve sustainable development worldwide. More than 13,000 companies and organizations have pledged their support for the UNGC in the belief that global sustainable development is possible if companies align their business practices with, and fulfill their social responsibilities in, 10 globally accepted principles in the areas of human rights, labor, the environment and the prevention of corruption.



### Applying the 10 Principles of the UNGC

The DIC Group Code of Business Conduct conforms with the 10 principles of the UNGC. The Group is capitalizing on its participation in this program to advance its operations around the world, while at the same time giving ever-greater consideration to the environment and human rights, with the aim of ensuring sustainability for global society.

### 10 Principles of the UNGC (official version)

Human rights	Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and
	Principle 2	make sure that they are not complicit in human rights abuses.
Labour	Principle 3	Businesses should uphold the freedom of association and effective recognition of the right to collective bargaining;
	Principle 4	the elimination of all forms of forced and compulsory labour;
	Principle 5	the effective abolition of child labour; and
	Principle 6	the elimination of discrimination in respect of employment and occupation.
Environment	Principle 7	Businesses should support a precautionary approach to environmental challenges;
	Principle 8	undertake initiatives to promote greater environmental responsibility; and
	Principle 9	encourage the development and diffusion of environmentally friendly technologies.
Anti-corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.

### Complying with ISO 26000

The DIC Group operates in a manner that is consistent with ISO 26000, released in November 2010, which provides businesses and organizations with guidelines for operating in a socially responsible manner.

Having positioned 2016 as the inaugural year of its new branding program, the DIC Group is implementing a broad range of systematic, forward-looking measures directed at both internal and external stakeholders. As a first step, the Group pondered the question of what value it brings to its customers and what role it is expected to play. This process led to the establishment of a new brand slogan, which conveys the value that the Group brings to its customers, and to the articulation of three corporate values.

## Brand slogan

# Color & Comfort

Based on the Group's "Color & Comfort by Chemistry" management vision, the new brand slogan was chosen because it clearly and concisely conveys the value that the DIC Group brings to its customers and because its suitability for global use will encourage greater brand awareness across the Group.

"Color & Comfort" expresses the DIC Group's desire to help create a society that adds rich color and comfort to people's lives. Looking ahead, the Group will work to communicate the message of its new brand slogan in a consistent manner to both internal and external stakeholders.

## Three corporate values

### Making it Colorful

- DIC helps make life colorful -

### Innovation through Compounding

- DIC brings innovation to society through its core compounding technologies -

### Specialty Solutions

- DIC draws on its expertise and comprehensive strengths to offer solutions -

The DIC Group has summarized the value that it brings to stakeholders in the form of three corporate values, which the Group's employees and executives will remain keenly aware of and incorporate into their actions and the proposals they make to customers. Through such efforts, the Group will work to reinforce the DIC brand, as well as to increase corporate value.

# New Medium-Term Management Plan: DIC108

Based on its mission, vision and corporate values, DIC formulated its new medium-term management plan, DIC108, which sets forth a growth scenario that outlines what needs to be done between now and fiscal year 2018 to achieve sustainable growth.

## The Future of the DIC Group

### Mission

Through constant innovation, the DIC Group strives to create enhanced value and to contribute to sustainable development for its customers and society.

### Vision

Color & Comfort by Chemistry

### Three corporate values that will underpin efforts to realize our Vision

#### Making it Colorful

- DIC helps make life colorful -

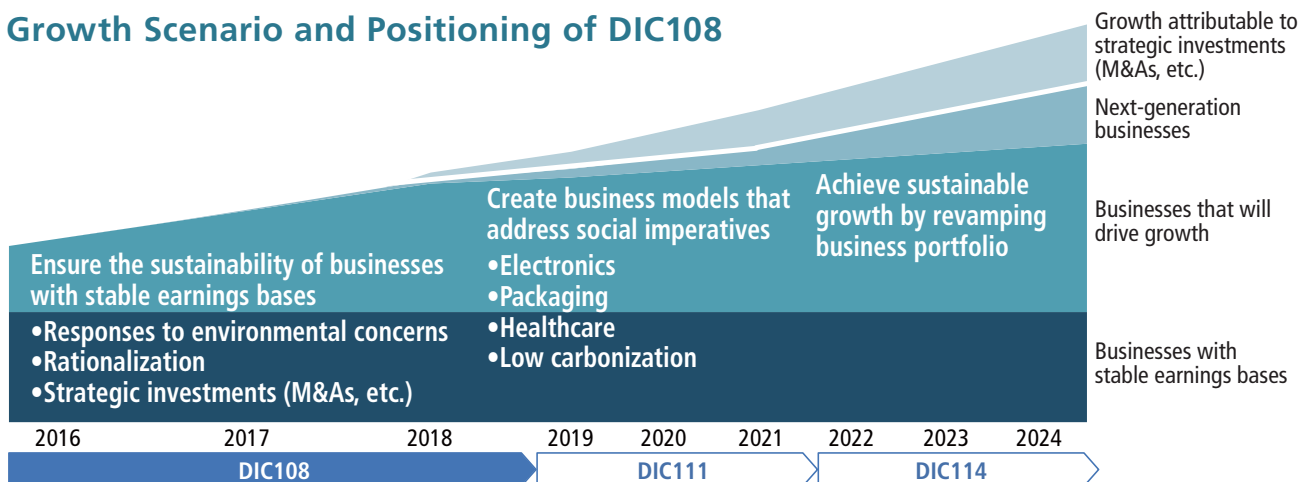
#### Innovation through Compounding

- DIC brings innovation to society through its core compounding technologies -

#### Specialty Solutions

- DIC draws on its expertise and comprehensive strengths to offer solutions -

## Growth Scenario and Positioning of DIC108



## Basic Strategies

<b>Business</b> Translate the growth scenario into reality through four business initiatives	<ul style="list-style-type: none"> <li>▶ Business initiative (1): Expand businesses that will drive growth</li> <li>▶ Business initiative (2): Pursue opportunities for strategic investments (M&amp;As, etc.)</li> <li>▶ Business initiative (3): Rationalize operations in mature markets</li> <li>▶ Business initiative (4): Create next-generation businesses</li> </ul>
<b>Finance</b> Pursue an ideal financial balance through cash flow management	<ul style="list-style-type: none"> <li>▶ Ensure a balance among investment in growth, financial health and shareholder returns</li> <li>▶ Budget ¥150.0 billion for strategic investments</li> <li>▶ Keep debt-to-capital (D/C) ratio at around 50%</li> <li>▶ Increase dividend payout ratio to around 30%</li> </ul>
<b>Management Infrastructure</b> Support globalization and increase sophistication with the establishment of a solid management infrastructure	<ul style="list-style-type: none"> <li>▶ Operations: Strengthen technical, R&amp;D, purchasing, SSC* and IT configurations globally</li> <li>▶ Corporate governance: Address challenges in accordance with the Corporate Governance Code</li> </ul>

\* Shared services center

## Business Strategy: Translate the DIC108 growth scenario into reality through four business initiatives

### Business Initiative 1

Expand businesses that will drive growth (Contribution to annual operating income: ¥15.0 billion)

#### High-performance materials (TFT LCs, functional pigments, PPS compounds and inkjet inks)

DIC will concentrate management resources on high-performance materials with the potential for market growth over the medium term and expand businesses by 1.7 times over the plan's three years.



##### TFT LCs

- Focus on R&D for n-type TFT LCs
- Secure share of market for LCs for LCD manufacturers in the PRC
- Increase market share by bringing new products to market



##### Functional Pigments

- Introduce new products in the area of processed pigments and expand sales by increasing production capacity
  - Expand portfolio of pigments for color filters
  - Increase production capacity for pigments for optical materials
  - Expand sales of pigments for cosmetics



##### PPS Compounds

- Expand sales for automotive applications
  - Establish global supply configuration
  - Expand and improve sales and technical service facilities



##### Inkjet Inks

- Introduce new products
  - Water-based inks for high-speed laser printers
  - Inks for textiles
  - Inks for coated papers
- Establish global production configuration

#### Packaging materials (Gravure inks, flexo inks, packaging adhesives and films)

DIC will work to offer distinctive and innovative solutions for customers and brand owners by providing one-stop services that tap into the DIC Group's extensive range of packaging-related materials and technologies.



### Business Initiative 2

Pursue opportunities for strategic investments (M&As, etc.)

Capitalizing on a dramatic improvement in financial health under DIC105, DIC will budget ¥150.0 billion for strategic investments, including in M&As, over three years. In addition to expanding business domains through the creation of next-generation businesses, the Company will work to increase the sales of its businesses by taking steps to prepare for a future business portfolio overhaul, the aim of which will be to expand businesses that will drive growth, and by ensuring the sustainability of businesses with stable earnings, thereby translating DIC108's growth scenario into reality.

### Business Initiative 3

Rationalize operations in mature markets (Contribution to annual operating income: ¥11.0 billion)

#### Publishing inks businesses in North America and Europe

DIC will seek to further enhance cost competitiveness by optimizing regional supply systems in line with production configurations streamlined under DIC105 and to ensure a sustainable business structure even in an environment characterized by falling demand.

#### Mature businesses in Japan (Publishing inks, polymers and support departments)

DIC will implement a drastic restructuring in advance of an expected decline in demand and will allocate management resources to growth businesses and markets.

### Business Initiative 4

Create next-generation businesses

DIC will address social imperatives by creating new value in such areas as materials for printed electronics, gas-barrier materials, health foods and algae-derived oils, as well as promote open innovation to overcome dependence on in-house resources and expand technical domains.

## Quantitative Targets of DIC108

The Company is targeting record-high operating income of ¥54.0 billion in the first year of DIC108, with ¥65.0 billion its target for the plan's final year.

(Billions of yen)

	2015 Actual	2016 Target	2017 Target	2018 Target
Net sales	¥820.0	¥870.0	¥920.0	¥960.0
Operating income	¥51.1	¥54.0	¥58.0	¥65.0
Net income	¥37.4	¥25.0	¥30.0	¥40.0
ROE (Return on equity)	15.0%	9.0%	10.0%	12.0%
Ordinary investments	¥34.0		¥120.0	
Strategic investments (M&As, etc.)	—		¥150.0	
D/C ratio*	47%		Around 50%	
Dividend payout ratio	21%		Around 30%	

\* D/C ratio: Interest-bearing debt / (Interest-bearing debt + Net assets)



## Working for You: Meeting Customer Needs while Reducing Environmental Impact

**Sun Chemical Corporation**  
President & Chief Executive Officer **Rudi Lenz**

Sun Chemical Corporation produces printing inks, pigments, coatings and specialty materials for major industries across Europe, the Americas, the Middle East and Africa. With sales of \$3 billion and over 8,000 employees, we operate 146 facilities in 37 countries. Sun Chemical made dramatic improvements in operating income throughout DIC105, and we will continue striving to meet and exceed the challenging DIC108 targets in our regions.

Sun Chemical's sustainability efforts are based on the concept of eco-efficiency as defined by the World Business Council for Sustainable Development: "The delivery of economically competitive goods and services that satisfy customers' needs and bring quality of life, while progressively reducing ecological impact and resource intensity throughout the life cycle." In the past year, we have made progress on most of our metrics through careful selection of materials and manufacturing processes and

through working proactively with government and industry trade groups. In 2016, we are making further progress toward this goal by also working closely with our suppliers to reduce the overall environmental footprint of their products and processes. Recent successes include:

- Switching to bio-sourced ethanol derived from corn
- Increasing the use of bio-sourced resins (tall oil or gum rosins) for publication inks
- Switching to reconditioned industrial containers for more and more of our packaging
- Shifting supply of carbon black to a new process using significantly less energy
- Replacing our aging internal car fleet with more fuel-efficient vehicles
- Shifting internal distribution to intermodal (rail + truck) wherever feasible.

We are committed to meeting our customers' needs, while never losing sight of the business essentials, which are reliable, on-time delivery; consistent product quality; dependable service; and groundbreaking innovation.

*Sun Chemical's Pledge: As the world's top producer of inks, pigments and coatings, we will lead our industry by understanding and minimizing the life cycle footprint of our products' impact on the environment.*

**Sun Chemical Corporation**



## ➤ Taking on the Role of Driving Growth under a Global Model

**DIC Asia Pacific Pte Ltd**  
Managing Director **Kazunari Sakai**

My feeling, in this the first year of DIC108, is that for us to achieve the medium-term management plan's targets it is crucial that we move closer to truly global management. Whether it be in implementing our business programs or developing management infrastructure, it will be difficult to realize progress unless we are global. I believe that the Asia–Pacific region has an important role to play as a touchstone for the Group's globalization.

The DIC Group's presence in the Asia–Pacific region comprises 19 Group companies in 12 countries and territories. The region is a mixture of many ethnicities, languages and religions, and the level of development varies greatly. Many of these companies have fully local management teams. In many cases, the administrative manager of each company is also a local individual. Another feature of note is that there are many women in these companies' management teams. In other words, these companies really personify diversity.

Going forward, the challenge is how to facilitate collaboration at the regional level among such a diverse group of people. In such promising areas as packaging inks and adhesives, for example, we are promoting development and marketing based on a regionally unified product strategy. Our ability to develop a cooperative production configuration, including through the establishment of mother plants, will be a key factor in determining our success. On the administrative front, we are working to provide efficient, agile support for local operations.

Under DIC108, we will press ahead with these and other strategies with the aim of positioning DIC Group companies in the Asia–Pacific region as a model for the global DIC Group.



**DIC Asia Pacific Pte Ltd**



## ➤ Promoting the Strengthening of Marketing Functions and Responding to Demand through Selection and Focus

DIC (China) Co., Ltd.  
Chairman and General Manager **Hideki Inouchi**

With a population of over 1.3 billion, the People's Republic of China is seeing a sharp rise in purchasing power. The standard of living of the middle class is greatly improving, as is clearly illustrated through the tourist shopping sprees we hear so much about. Meanwhile, the problem of overproduction in the Chinese economy is a major issue, which has been particularly apparent in such sectors as cement, steel and coal. Economic growth is slowing, and this year's National People's Congress adopted a GDP growth target of between 6.5% and 7.0%—far lower than the double-digit growth seen in recent years.

What this tells us is that although overall growth is slackening, there are latent needs. If we can capture these needs, the PRC is still a market in which robust growth can be expected. In other words, we believe that there are significant business opportunities.

Even though economic growth in the PRC is slower than in recent years, in this the first year of DIC108 we are working to cultivate promising high-end markets for which DIC Group technologies are suited in line with two key DIC Group sustainability themes, namely, Business Models that Respond to Social Imperatives and New Technology Development and Value Creation. Through these efforts, we aim to contribute to the achievement of DIC108's targets.

With DIC108, the DIC Group's focus has shifted from improving its financial health to pursuing opportunities for strategic investments that will support growth. Accordingly, we will explore chances to expand investments, including M&A activities, in both the PRC and adjacent areas. To this end, we will work to reinforce our local marketing function.

Going forward, DIC (China) will work to identify businesses that enable us to further strengthen our marketing capabilities, focus resources on those businesses and concentrate efforts on locking in demand.

**DIC (China) Co., Ltd.**



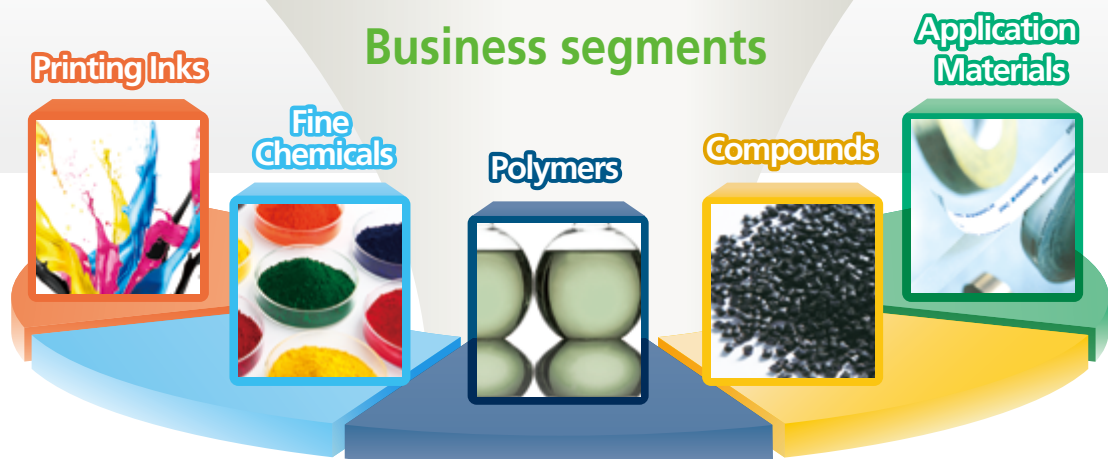
The DIC Group has capitalized on its capabilities in organic pigments and synthetic resins, the principal material for printing inks, to build a broad portfolio. Today, the Group classifies its products in five business segments: Printing Inks, Fine Chemicals, Polymers, Compounds and Application Materials. Through its Advanced Technology Sales Administrative Division., Life & Living Sales Administrative Division and Packaging & Graphics Sales Administrative Division—three sales administrative divisions organized in line with three key market categories—and its affiliated companies, the DIC Group works to provide products that respond to the needs of society and its customers.

# Color & Comfort

## Markets

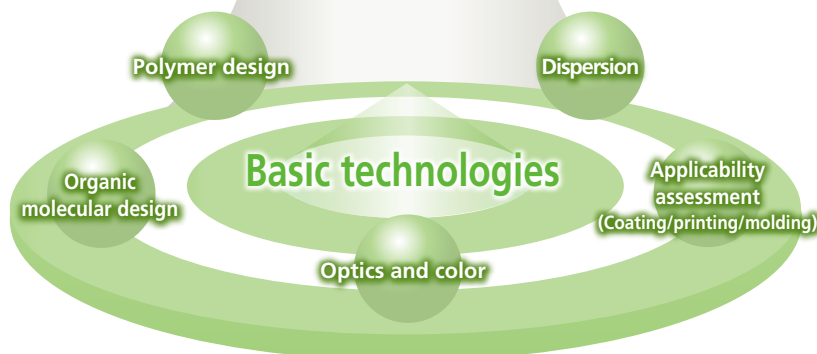


## Business segments



## The DIC Group's Basic Technologies

The DIC Group strives constantly to contribute to a materially and spiritually affluent society through the development and provision of environment-friendly technologies and products. To this end, the Group is leveraging its basic technologies in the areas of optics and color, organic molecular design, polymer design, dispersion and applicability assessment (coating, printing and molding) to promote the development of products in key target markets.





### Printing Inks Product Division

- Offset inks
- Gravure inks
- Flexo inks
- Can coatings
- News inks
- Packaging adhesives
- Printing supplies

This segment focuses on printing inks, DIC's mainstay business since its establishment. A global market leader, DIC boasts an extensive product portfolio ranging from publishing inks to inks and adhesives for packaging, enabling it to respond to the needs of customers worldwide.



Outstanding color reproduction and reduced energy consumption

**DAICURE HR series**  
(High-sensitivity UV-curable offset inks)

As well as suitability for use with low-power ultraviolet(UV) printers, DIC's innovative **DAICURE HR** high-sensitivity UV-curable offset inks deliver outstanding color reproduction, thus responding to the needs of customers seeking to switch from printing with oil-based inks to UV-curable printing.



Ensuring safety for food and the environment

**FINART series**  
(Gravure inks for food packaging)

**FINART** gravure inks combine superb image quality and suitability for high-speed printing, as well as respond to demand for the reduction of solvents in food packaging, thereby contributing to food safety and the environment.



### Pigments Product Division

- Organic pigments
- Special effect pigments
- Metal carboxylates
- Sulphur chemicals (lubricant additives)

### Liquid Crystal Materials Product Division

- Thin-film transistor (TFT) LCs
- Supertwisted nematic (STN) LCs

Products in this segment include a wide variety of materials indispensable to digital devices, including LC materials and organic pigments for color filters, which are expected to drive growth for DIC in the years ahead.



A marked increase in brightness and reduced LCD energy consumption

**G58 series**  
(Green pigments for color filters)

In manufacturing the G58 series of green pigments, DIC defied conventional wisdom by using zinc, rather than copper, as the central metal, which achieves a marked increase in brightness and reduces energy consumed by the liquid crystal displays (LCDs).



Responding to the evolution of LCDs

TFT LCs

The production of TFT LCs demands advanced technological expertise. DIC is one of only a few companies in the world with such expertise. DIC's technologies ensure it is able to provide products that respond to demands for faster response times and greater long-term reliability.

## Polymers



Capitalizing on DIC's world-class technologies and know-how, this segment provides synthetic resins and resin-related products to a wide array of industries.

### Polymers Product Division

- Waterborne resins
- UV-curable resins
- Acrylic resins
- Methacrylate resins
- Epoxy resins
- Phenolic resins
- Fluorochemicals
- Polyurethane resins
- Polyester resins
- Plasticizers
- Unsaturated polyester resins
- Polystyrene
- Alkylphenols



Environment-friendly next-generation adhesives that respond to diverse needs

**TYFORCE series**  
(Moisture-curing hot melt adhesives)

This series of solvent-free adhesives delivers superb production efficiency and bonding strength. These resins have been adopted for a wide range of applications, including building materials, apparel and electronic components.



Technologies that facilitate the control of light for applications ranging from display cases to optical fibers

**DEFENSA OP series**  
(Low-refractive index UV-curable resins)

Used for optical fiber cladding and optical coatings, the *DEFENSA OP* series' low-refractive index UV-curable resins help improve the performance of optical fibers and the brightness of display cases.

# New Value Created through Dispersion and Compounding Technologies

## Compounds



### Liquid Compounds Product Division

Inkjet inks  
Fiber and textile colorants and artificial leather colorants  
High-performance coatings and adhesive materials  
Coatings for optical films

### Solid Compounds Product Division

PPS compounds  
High-performance compounds  
Plastic colorants  
High-performance optical materials

This segment leverages resin and pigment dispersion and compounding technologies accumulated since DIC's founding to provide products that respond to needs in the expanding global digital printing, automotive and electronics markets.



Helping customers realize outstanding color development and gloss

*SunJet* inkjet inks

Advanced DIC Group pigment dispersion technologies ensure excellent color development and a glossy finish. With a reputation for reliability, *SunJet* inkjet inks enjoy popularity in markets around the world.



Contributing to the realization of lighter, more fuel-efficient vehicles

*DIC.PPS* series  
(PPS compounds)

PPS compounds in the *DIC.PPS* series maintain excellent rigidity, strength and electrical insulating properties, as a result of which these compounds have found application in components for hybrid, electric and other environment-friendly vehicles as an alternative to metal materials.

# A Variety of Products Made Possible by the Integration and Application of DIC Technologies

## Application Materials



- Application Materials Product Division**
- Industrial adhesive tapes
  - Magnetic tapes and coated sheets
  - Hollow-fiber membranes and modules
  - Coextruded multilayer films
  - Health foods and natural colorants
  - Decorative boards, interior housing products and coatings for building materials
  - Decorative sheets and decorative films
  - Processed sheet molding compounds (SMCs) and bulk molding compounds (BMCs)
  - Molded plastic products

This segment encompasses a diverse range of products, including industrial adhesive tapes, hollow-fiber membranes and modules, and coextruded multilayer films, which are made possible through the integration of proprietary coating, printing, molding and other technologies.



Enhancing waterproof smartphone construction

**DAITAC WS#84 series**  
(Double-sided adhesive tapes for waterproof mobile communications devices)

One of the first series of waterproof tapes to be developed and marketed for waterproof smartphone construction, the DAITAC WS#84 series continues to support efforts to enhance the ability of smartphones to resist water ingress.



A superfood that provides a balanced wealth of nutrients

**DIC Spirulina**

Spirulina is an edible blue-green algae rich in vitamins, minerals and  $\beta$ -Carotene, as well as protein. Spirulina's nutritional value and popularity as an ingredient not only in health foods but also for culinary applications has earned it a reputation as a superfood.

# Innovative Products that Address Key Social Imperatives and Respond to the Needs of Stakeholders

Addressing issues related to climate change, energy, food security and disaster prevention is one of the most significant challenges facing the world today. The DIC Group is leveraging the power of chemistry to provide products that can help resolve such issues and further drive social sustainability.

## Social Imperatives

- Energy conservation
- 3Rs ("Reduce, Reuse, Recycle")
- Aging society
- Safety/Peace of mind
- Human rights
- Highly information-oriented society
- Comfortable lifestyles
- Reduction of substances that harm the environment
- Reduction of CO<sub>2</sub> emissions
- Improvement of convenience
- Food loss reduction
- Better product quality

1

Color solutions for customers in fields ranging from outdoor signage to textiles

## Inkjet Inks for Industrial and Office Printers

### Social Imperative

### Reduce environmental impact through on-demand printing

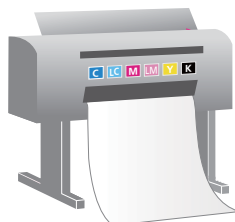
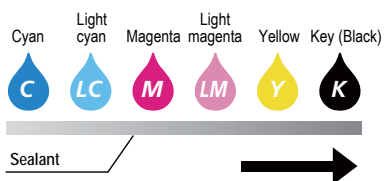


Outdoor display graphics, including billboards, posters and banners, product packaging, printed materials in the workplace, and textiles used in garments, bedding and interior decorating are just a few of the many things that make our lives colorful. However, in this era of mass consumption the use of resources and energy and the generation of waste in these and other areas are just a few of the many critical issues facing manufacturers and consumers. At the same time, with manual work the only way to satisfy low volume diversified orders, problems remain in terms of speed, quality and cost.

In recent years, the emergence of digital printers has fueled the popularity of on-demand printing, which allows items to be printed in the quantity desired at the time needed, making it possible to respond promptly to low volume diversified needs while also reducing both resources and energy use and waste emissions. In particular, inkjet printers—which work by jetting miniscule droplets of ink onto a substrate, are smaller and more energy-efficient than laser printers and can reproduce images and text with superb precision without the print heads ever touching the print surface—have gained popularity in many different fields.

The quality of images recreated by inkjet printers is influenced greatly by the characteristics of the inks. In addition to durability, image quality and weatherability, i.e., resistance to moisture and UV light, inks must maximize the performance of increasingly high-speed, high-precision inkjet printers. The development and supply of inks optimally suited to different types of inkjet printers continue to drive the expansion of on-demand printing to an ever-broader variety of media and are thus expected to help reduce the environmental impact of on-demand printing in various fields.

### How do inkjet printers work?



Inkjet printers work by jetting miniscule droplets of ink, which the application of heat or voltage propels onto the substrate. They can be used to print photographs with superb detail and accurate color. Inkjet printers using solvent inks and specialized coating or lamination to yield a product that can stand up to extended outdoor use. Because there is no need to make printing plates, inkjet printers are also ideal for low volume diversified printing.



## Aqueous inkjet inks that help reduce environmental impact for a variety of industries



### DIC uses its proprietary pigment dispersion technologies to develop inkjet inks that provide water-and light-fastness with excellent color gamut and gloss

Large-format inkjet printers for industrial and office applications use a variety of different inks. The DIC Group, including both DIC and Sun Chemical, supply printer manufacturers with a broad range of global market-leading UV-curable\*, solvent and aqueous inkjet inks. The Group has earned particularly high praise for its environmentally friendly aqueous inkjet inks, which are formulated with pigments dispersed in water. While aqueous inkjet inks exert less of an impact on the environment than solvent-based products, obtaining a stable dispersion of pigments in water has traditionally been problematic, making it difficult to realize excellent color gamut and gloss. DIC utilized its proprietary pigment dispersion technologies to resolve this challenge, creating inkjet inks that combine the inherent water-and light-fastness of pigments with the superb color gamut and gloss required for the printing of posters and photographs.

The combination of digital printers and aqueous pigmented inks is also attracting attention from manufacturers of textiles used in garments, bedding and interior decorating. Conventional textile printing requires the production of printing plates for each design, making this a laborious, costly and time-consuming process that uses a significant amount of electricity and generates a considerable amount of wastewater. In contrast, inkjet printers can print digital data directly onto fabrics, eliminating the need for plates, thereby facilitating low volume diversified printing and reducing electricity use. Moreover, pigment inks are compatible with many fabric types, substantially reducing wastewater generated.

The DIC Group's inkjet inks lineup includes UV-curable inks that use light-emitting diode (LED) light sources and solvent inks formulated with environment-friendly solvents.

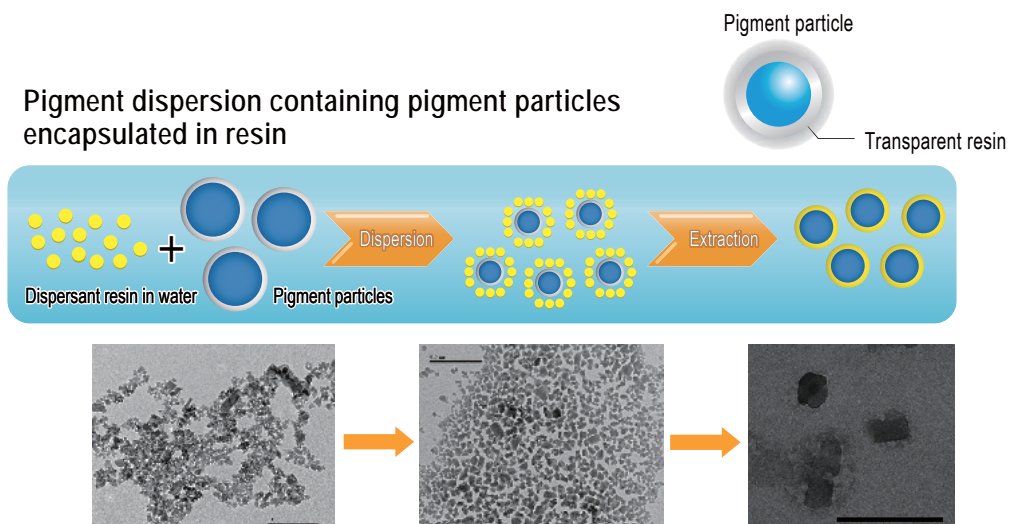
\* Inks cured (dried) using high-intensity UV light

#### Large-format inkjet printer for textile printing

- Allows low volume diversified printing
- Generates less wastewater than screen printing
- Emits no volatile organic compounds (VOCs) when used with aqueous pigmented inkjet inks

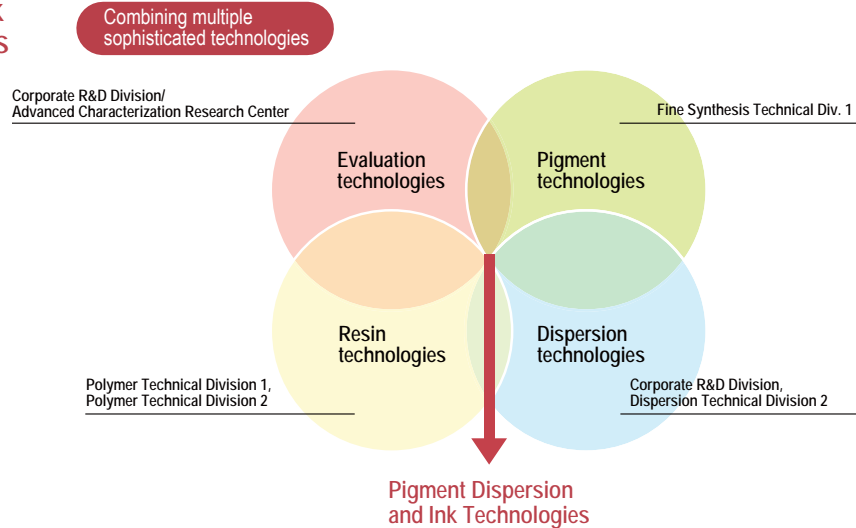


#### Pigment dispersion containing pigment particles encapsulated in resin





## DIC Pigment Dispersion and Ink Technologies Used in Inkjet inks



### Key People from DIC

#### We are providing integrated solutions that leverage DIC Group capabilities and meet advanced requirements.

Inkjet inks must meet the complicated requirements of printer and printhead manufacturers and as such we need to control the properties of picoliter-level droplets. Our competitive edge reflects our ability to provide integrated solutions that leverage the DIC Group's pigment dispersion and stabilization processes, as well as to design raw materials such as synthetic resins.

Industrial and office printers are rapidly improving in terms of speed and accuracy, providing an opportunity for us to extend value by optimizing our products, an effort that is supported by the evolution of resins and pigments and advanced evaluation techniques.



General Manager, Dispersion Technical Division 2 **Satoshi Idemura**

#### We are collaborating with Sun Chemical and working to expand markets for the Group's inkjet inks.

In 2013, DIC and Sun Chemical consolidated their respective lines of printing inks for industrial inkjet printers under the *SunJet* brand name. DIC excels at aqueous dispersions and inks, while Sun Chemical's forte is UV-curable and solvent-based inks. By combining these strengths, which DIC and Sun Chemical have cultivated independently by developing unique technologies and accumulating know-how, we are working to propose effective solutions that meet customers' needs.

We recognize that customers' needs have shifted to include the reduction of energy and resource use, prompt delivery and the elimination of production waste, as well as high product quality. I believe that inkjet ink technology offers a particularly promising solution to these and other social imperatives.

Today, we are seeing a dramatic shift to on-demand printers for office use and textile printing, among others, and we are expecting rapid growth for packaging applications—one of our focus areas—in the next few years. By expanding this business, we will also continue helping to reduce the environmental impact of our customers' operations.



Manager in charge of jet ink products, Imaging and Reprographic Products Sales Department, Liquid Compounds Product Division **Yoshiyuki Koizumi**

Hollow-fiber membranes that facilitate the removal of gas from and dissolving of gas into liquids

# SEPAREL® Hollow-Fiber Membranes and Membrane Modules

Social Imperative



## Eliminate gases dissolved in liquids, which can adversely impact various processes

From daily life to industrial production, water pipes play a key role in a truly diverse range of situations. However, oxygen, nitrogen, carbon dioxide and other gases dissolved in water can have many negative consequences. One of these is rust, formed when iron and oxygen react in the presence of water, which can shorten the useful life of plumbing pipes. Oxygen can be removed with chemicals, but some contain substances that present health hazards, and so they pose a risk to individuals using them.

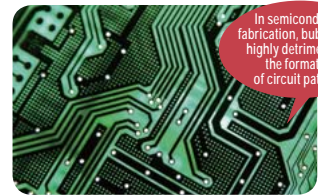
Another consequence of oxygen in liquid is the formation of bubbles, a result of fluctuations in pressure, which may adversely affect the operation of precision equipment. For example, bubbles forming in jet inks can hamper ejection from nozzles, damaging print quality, while in semiconductor fabrication bubbles in photoresists and developers can impede the formation of circuit patterns, causing defects.

As these examples indicate, there is a clear need for effective and environment-friendly ways to remove gases dissolved in liquids, thereby reducing related resource and energy losses, as well as waste arising from product quality issues attributable thereto.

Rust caused by oxygen can degrade plumbing pipes



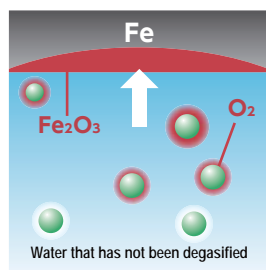
In semiconductor fabrication, bubbles are highly detrimental to the formation of circuit patterns



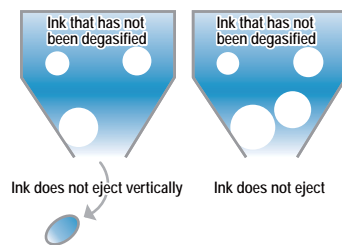
Bubbles in jet inks can hamper ejection from nozzles



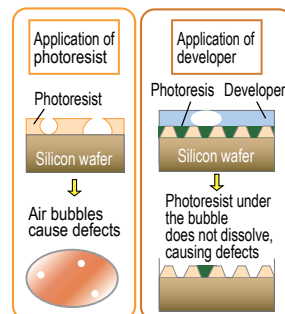
### Examples of the adverse impact of gases dissolved in liquids



Rust caused by oxygen



Bubbles in jet ink impede ejection from nozzles



Bubbles can impede the formation of circuit patterns

DIC's Response



## Hollow-fiber membranes for degasification (removal of gases dissolved in liquid) and aeration (dissolving of gases into liquid)



DIC developed a proprietary hollow-fiber membrane with groundbreaking gas separation capabilities approximately 30 years ago.

In the late 1980s, DIC developed a proprietary hollow-fiber membrane made from a polyolefin.

### 1. Compatibility with highly permeable liquids

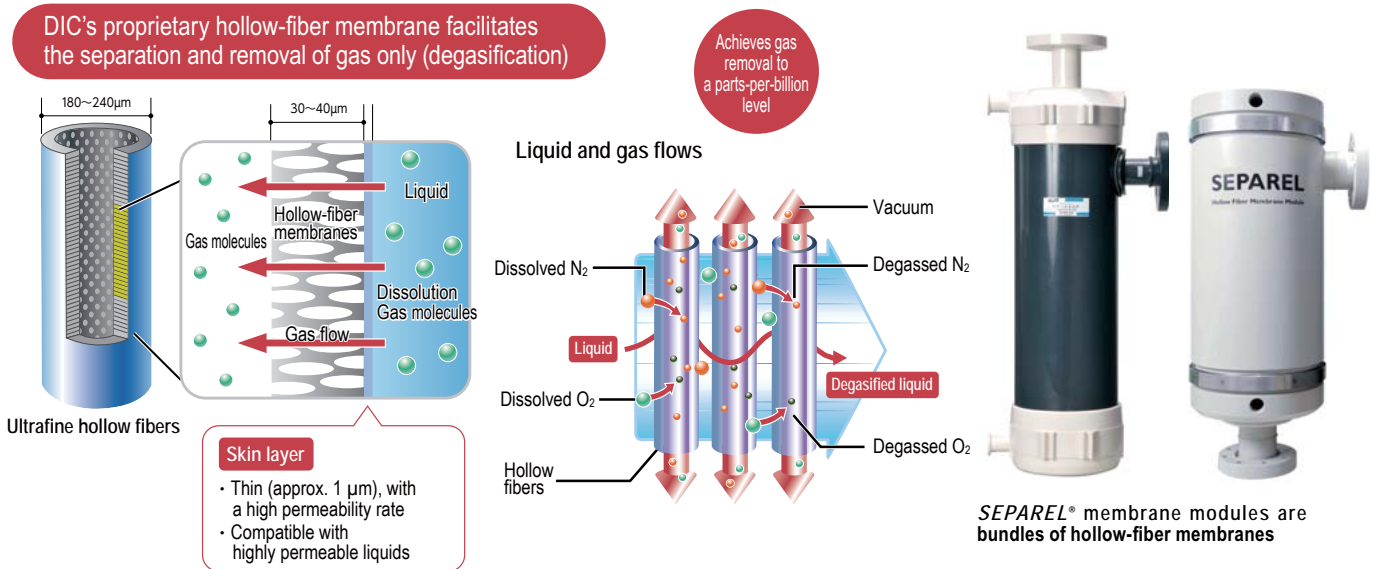
DIC's hollow-fiber membrane consists of a porous inner supporting layer and a nonporous outer layer called a skin layer, making it compatible with highly permeable liquids.

## 2. High gas permeability

Owing to its molecular structure, the raw material used in the hollow fibers—poly (4-methyl-1-pentene) (PMP)—boasts a high level of gas permeability. In addition, at approximately 1  $\mu\text{m}$  the skin layer is exceptionally thin, as a result of which the membrane delivers an excellent degassing performance.

## 3. Ultrafine hollow fibers

The minimum outer diameter of DIC's hollow-fiber membranes is around 180  $\mu\text{m}$ , the smallest possible for a degasification membrane. This structure, made possible by the use of ultrafine hollow-fiber membranes, maximizes membrane surface in small spaces.



## Applications for DIC's hollow-fiber Membranes are Found in Medicine, Everyday Life and Industry

One of the earliest applications for DIC's hollow-fiber membranes was oxygenators, which are used to dissolve oxygen into and remove carbon dioxide from blood during surgical procedures. Subsequently, DIC commercialized these membranes in SEPAEL<sup>®</sup> hollow-fiber membrane degasification and aeration modules. Uses for SEPAEL<sup>®</sup> modules include removing oxygen from pipes in power plants, factories, office buildings and condominium complexes to protect against rust, thereby pronging their useful lives. In the area of inkjet printing, these modules are used to remove oxygen from jet inks, which helps enhance print quality. SEPAEL<sup>®</sup> modules also boast outstanding aeration capabilities. In semiconductor fabrication, for example, they are used to dissolve carbon dioxide into ultrapure water, which facilitates control of the water's specific resistance value, preventing dust from readhering due to static electricity and the electrostatic destruction of substrate patterns.

Key People  
from DIC

## Our goal is to provide products that customers cannot do without.

*SEPAREL*<sup>®</sup> membrane modules are light and compact and can be installed simply by lining them up, making them far more flexible and easy to move around than the degasification towers commonly seen at production facilities. Moreover, unlike with chemical degasification these units are not hazardous to human health or the environment. Because the hollow-fiber membranes used in these modules are made from resin, there are constraints in terms of heat-, pressure- and solvent-resistance. We recognize that if we can improve the performance of membranes on these fronts, applications will be almost limitless. Recognition of the *SEPAREL*<sup>®</sup> name is still low. As I believe there are potential customers around the world who are troubled by dissolved gas and gas bubbles who would benefit from these products, we will continue working with DIC Group companies overseas to promote awareness of *SEPAREL*<sup>®</sup> among such customers. I am confident that once they try our membrane modules, they won't be able to do without them!

Assistant Manager in Charge of Membranes Sales Department, Application Materials Product Division **Ken Tamaoki**



## The secret is an exclusive dual-layer structure with a skin layer.

All aspects of the *SEPAREL*<sup>®</sup> membrane business—including production of hollow fibers, development of modules, commercialization and module production—are centered at the Chiba Plant. These products are a prime example of the comprehensive capabilities of the DIC Group. These modules are currently used in diverse fields, including ink production, water treatment, medicine and semiconductor fabrication, and we constantly receive inquiries regarding the possibility of deployment in other fields. The fact that my predecessors were able to develop something so revolutionary 30 years ago is a source of tremendous pride, as is the technological prowess that made it possible. Our team is committed to working hard to further refine and improve product performance. With recent advances in the speed and precision of semiconductor fabrication systems and printers and a commensurate increase in degasification levels, customers' quality expectations have become increasingly exacting. The higher the requirements for the removal of gases dissolved in liquid or for the dissolving of gases into liquid, the greater the value realized by *SEPAREL*<sup>®</sup> modules.

Head Researcher, Polymer Processing Technical Group 5, Polymer Processing Technical Division **Shigeaki Fujieda**



## TOPICS

DIC's *SEPAREL*<sup>®</sup> hollow-fiber membrane module is used as an ultrapure water degasification device in the Super-Kamiokande neutrino detector

In 2002, Masatoshi Koshiba, Professor Emeritus of the University of Tokyo was awarded the Nobel Prize in Physics for the first real-time observation of neutrinos from a supernova explosion. A key factor in Professor Koshiba's achievement was the Kamiokande detector, part of the University of Tokyo's Institute for Cosmic Ray Research (ICRR), which is located in Gifu Prefecture. The Super-Kamiokande detector, a super-high sensitivity detector that operates on the same principle as its predecessor, consists of a cylindrical stainless steel tank, which holds 50,000 tons of ultrapure water, and approximately 11,200 photomultiplier tubes, which are installed on the tank wall. A *SEPAREL*<sup>®</sup> hollow-fiber membrane module is used as an ultrapure water degasification device in the Super-Kamiokande's water purification system, its outstanding performance contributing to research carried out at the detector. The Super-Kamiokande detector was also used by Professor Takaaki Kajita, director of the ICRR, who received the 2015 Nobel Prize in Physics for his discovery of neutrino oscillations.



(c) Kamioka Observatory, ICRR(Institute for Cosmic Ray Research), The University of Tokyo

For more information, visit the Super-Kamiokande official website.  
<http://www-sk.icrr.u-tokyo.ac.jp/sk/index-e.html>

Rich color and superior safety contribute to the cosmetics industry

## Pigments for Cosmetics

Social Imperative



Develop color materials that meet the stringent safety and quality management standards required for use in cosmetics



Many people use cosmetics because doing so makes them feel more attractive and confident. Cosmetics are also an important aspect of fashion and culture, bringing rich color to everyday life. The quality of cosmetics is influenced by multiple factors, including the materials used to impart color. Color materials for cosmetics, which can be classified broadly as organic pigments, inorganic pigments, dyes and natural colorants, are particularly important in makeup, which includes lipstick, mascara, eye shadow and base makeup products such as foundation, primer and concealer.

Color materials for cosmetics can be of mineral, vegetable or synthetic origin. Recently, consumers demand low heavy metals contamination in these kinds of colorants. For this reason, many countries and regions have established safety standards for cosmetics and are working to strengthen restrictions on heavy metal contaminants in color materials.

With population and economic growth in emerging markets expected to drive up demand for cosmetics in the years ahead, cosmetics manufacturers worldwide are coming under increasing pressure to adhere to pertinent laws and regulations and guarantee the safety of their products, as well as to promote awareness and compliance across their entire supply chains.

DIC's Response



Superior color materials that comply with safety standards, laws and regulations in countries and regions around the world



Sun Chemical provides pigments for cosmetics that are among the top in the world.

DIC Group company Sun Chemical's products are the choice of cosmetics manufacturers worldwide, reflecting solid marks given the company's 50-plus years in business, during which it has built up formidable product development capabilities, production technologies and knowledge of color, as well as its ability to comply swiftly with laws and regulations, as well as with safety standards, in different geographic markets. For example, the U.S. Food and Drug Administration (FDA) has established rigorous standards governing, among others, prohibited ingredients, content, composition and labeling, with which all color materials for cosmetics must comply. Sun Chemical's organic pigments for cosmetics are FDA-certified.

Sun Chemical continues to leverage its extensive technologies to develop unique organic, inorganic and hybrid organic-inorganic pigments. Known as having some of the lowest residual heavy metal levels of any products on the market, Sun Chemical pigments continue to make them a popular choice for such diverse applications as lipstick, foundation, nail polish and hair coloring.



DIC's booth at CITE (Cosmetic Ingredients and Technology Exhibition) Japan 2015



## Sun Chemical's Lineup of Pigments for Cosmetics



### SunCROMA®

Boasting a full portfolio of organic and inorganic pigments, *SunCROMA*® is widely accepted as the color standard for the cosmetics industry. *SunCROMA*® pigments also comply with pertinent laws and regulations in the United States, Europe and other countries and regions around the world.



### Soft-Tex®

Proprietary technologies give *Soft-Tex*® pigments a highly uniform particle size and easy dispersion.



### SunPURO®

The *SunPURO*® line's extremely low heavy metal content levels have earned it certification under France's ECOCERT\*, considered the global standard for ingredients used in natural cosmetics.



### INTENZA®

The *INTENZA*® line comprises hybrid pigments combining FDA-certified organic colorants and pearlescent effect pigments.

## DIC and Sun Chemical are Stepping Up Collaboration to Expand Markets and Enhance Product Appeal.

Sun Chemical became a subsidiary of DIC in 1986. Since then, the two companies have built a strong alliance in multiple fields. Recognizing the importance of strengthening collaboration with Sun Chemical and further maximizing synergies to achieve further growth, in January 2016 DIC established a dedicated department to handle pigments for cosmetics within its new Pigments Product Division. Under its new medium-term management plan, DIC108, which was announced in February 2016 and will guide its efforts from fiscal year 2016 through fiscal year 2018, the DIC Group has positioned pigments for cosmetics as a key growth business. Going forward, the Group will work to expand this business in Japan, as well as to advance into untapped markets in emerging economies and elsewhere and expand its development of products in the personal care market, which includes body care, skin care and hair care products.

### Key People from DIC

#### In the future, we hope to market "designed-in-Japan" pigments for cosmetics in global markets.

With the passing of stringent laws and regulations governing cosmetics in emerging economies in recent years, Sun Chemical has seen a sharp increase in orders for its pigments for cosmetics, which are renowned for their quality and safety. Struggling to keep pace with demand, the company has resolved to expand production capacity at its plants in the United States and the United Kingdom. One of main objectives of our product division is to promote the global expansion of the DIC Group's pigments for cosmetic business, with a key task being to establish operations in Japan. I am confident that collaboration between DIC and Sun Chemical will lead to the development of "designed in Japan" pigments that will gain favor in global markets.

Senior Manager of Product Planning, Pigments Product Division, Fine Chemicals Segment **Yoshinari Akiyama**



#### One day, people will automatically associate the DIC name with pigments for cosmetics.

Our team was established to promote marketing and sales as part of a larger project aimed at building a value chain by DIC for Sun Chemical pigments for cosmetics. In addition to leading cosmetics manufacturers, our customers include companies that process pigments into functional ingredients, as well as companies that manufacture cosmetics on an OEM basis. I look forward to the day when the Japanese market automatically associates the DIC name with pigments for cosmetics. To this end, we are not only implementing conventional sales initiatives but also participating in cosmetics industry trade shows and making use of mass media and the website to promote sales.

Manager Pigments Sales Department 1, Pigments Product Division, Fine Chemicals Segment **Manabu Ohira**



#### I am working to expand sales channels with the aim of "Making it Colorful."

The DIC Group's brand slogan is "Color & Comfort." Our new medium-term management plan, DIC108, outlines three key corporate values, one of which is "Making it Colorful." Both of these phrases really resonate with the value provided by color materials for cosmetics and have provided extra encouragement to those of us in this business. Pigments for cosmetics may strike some people as an unusual fit for DIC, but these pigments are used in products for consumers, so enhancing recognition of the Sun Chemical brand name will also encourage familiarity with the DIC name. Looking ahead, I will continue working to expand sales channels, placing a high priority on the perspective of consumers who use cosmetics.

Pigments Sales Department 1, Pigment Product Division, Fine Chemicals Segment **Mari Samejima**



\* Based in France, ECOCERT is an independent certification authority that inspects and certifies products that comply with European standards for organic products.

Message from  
Sun Chemical

## “Not just a pretty face”

With global demand for high-quality organic pigments growing at double-digit rates, driven by more stringent global regulations and trends, mainly in decorative lip care products and nail polish, it is important that our company further diversifies and works on longer-term strategic projects in the cosmetics industry.

Our “Not just a pretty face” concept shows our customers that we have an extensive range of inorganic pigments, traditional and functional fillers, soft focus pigments, effect pigments, dyes and—last but not least—treated pigments, suitable for applications in skin care, toiletries and spa treatment products.

Together with our capacity increases at both production sites, in the United States and the United Kingdom, to support the base business, this is a way to show our commitment to the high-value, fast-moving cosmetics world.

Global Director, Cosmetics, Sun Chemical B.V. **Bart Vanderbiest**

Sun Chemical team at In-Cosmetics Paris, 2016

## Aquacure Inkjet Inks Technology Delivers the Positive Print Characteristics of a Water-Based Ink

The Sun Chemical Group, a core member of the DIC Group, is the leading manufacturer of printing inks in terms of market share in both the Americas and Europe.

### Social Imperative



Today's core inkjet technologies—aqueous, solvent and UV-curable—perform perfectly well across a wide variety of products and applications. However, there are fundamental pros and cons with each chemistry. Being water-based, aqueous inks have strong environmental credentials, provide a wide color gamut, offer excellent resolution and are relatively inexpensive. However, printheads require increased maintenance, substrates need to be coated, which can cost more, and aqueous inks require lamination in order to be suitable for outdoor use.

UV-curable inks have superb media flexibility, offer high durability and can adhere to both uncoated stocks and other challenging materials such as vinyl, glass and wood. They cure almost instantly, enhancing image quality, reducing energy consumption and improving productivity. On the downside, UV-curable inks have a limited color gamut, the structured ink film produces a noticeably raised finish, and they need greater care in handling and transportation.

Solvent inks produce exceptionally durable finishes that are ideal for demanding outdoor applications. Nonetheless, the VOCs released as the solvent evaporates require a ventilated environment, making these inks the least environment-friendly option. They are also difficult to handle in a single-pass printer architecture, owing to the rate of evaporation at elevated temperatures and the inability to exercise inactive nozzles during printing.

In an ideal world, inkjet users want a solution that combines the characteristics of aqueous and UV-curable inks while at the same time providing consistent high-quality output with an extended color gamut. Such a hybrid composition would deliver odor-free prints, provide excellent adhesion to a wide range of media, and offer enhanced resistance and high flexibility. It would also be environment-friendly, with a reduced film weight, and have low migration properties.

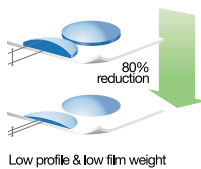
### Sun Chemical's Response



Sun Chemical addressed this imperative with the introduction of *Aquacure*, a functional aqueous technology combining water-based and UV-curable solutions. Comprised of 60–90% water, *Aquacure* inkjet inks deliver the positive print characteristics of a water-based ink, including low film weights, lack of odor, and an impeccable health, safety and environmental profile. The UV-curable component provides the ink's versatility and durability, as well as ensuring reliable jetting through the printhead. *Aquacure* technology delivers adhesion to a broad range of media, offers superb flexibility and has an extensive color gamut. The technology delivers significant advantages in the graphics sector, but can also achieve migration limits and compliance for primary food packaging in combination with the appropriate press design. Unlike 100% solids UV-curable inkjet inks, *Aquacure* can produce low film weights similar to those in conventional print processes.

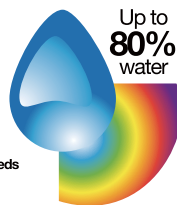
#### Key benefits

- Low profile
- Low film weight
- High quality output/resistant
- Reliable jetting performance
- Versatile across a range of substrates



Low profile & low film weight

- A truly functional aqueous inkjet ink
- Based on unique aqueous chemistry
- All-new ink platform for future market needs



#### Environmental credentials



Low odour



Low migration (compliant)



Hazard label-free

**VOICE** from the DIC Group

Business Director, Digital, Sun Chemical Corporation **Peter Saunders**

*Aquacure* provides a look and feel that converters and brand owners demand.

This newly developed aqueous chemistry offers functionality that digital printers have wanted from water-based technology and will have a positive impact on both well-established and emerging inkjet market segments. Most importantly, *Aquacure* uses between 70–80% renewable materials, is hazard- and odor-free, and is compliant for low migration packaging. *Aquacure* provides a look and feel that converters and brand owners demand. To date, tests involving key manufacturers have proven to be highly successful.





## Basic Approach to Corporate Governance

The DIC Group has prepared a Policy on Corporate Governance in which it discloses its basic approach to corporate governance as follows:

The DIC Group identifies the purpose of corporate governance as being to ensure effective decision making pertaining to its management policy of achieving sustainable corporate growth and expansion through sound and efficient management, while at the same time guaranteeing the appropriate monitoring and assessment of and motivation for management's execution of business activities. With the aim of achieving a higher level of trust on the part of shareholders, customers and other stakeholders and enhancing corporate value, the DIC Group also promotes ongoing measures to reinforce its management system and ensure effective monitoring thereof.

## Outline of Policy on Corporate Governance (Chapter Headings)

- ① Basic approach to corporate governance
- ② Securing the rights and equal treatment of shareholders
- ③ Appropriate cooperation with stakeholders other than shareholders
- ④ Ensuring appropriate information disclosure and transparency
- ⑤ Responsibilities of the Board
- ⑥ Dialogue with shareholders
- ⑦ Other

Outline of Policy on Corporate Governance (Chapter Headings): [http://www.dic-global.com/en/about/pdf/governance\\_en.pdf](http://www.dic-global.com/en/about/pdf/governance_en.pdf)

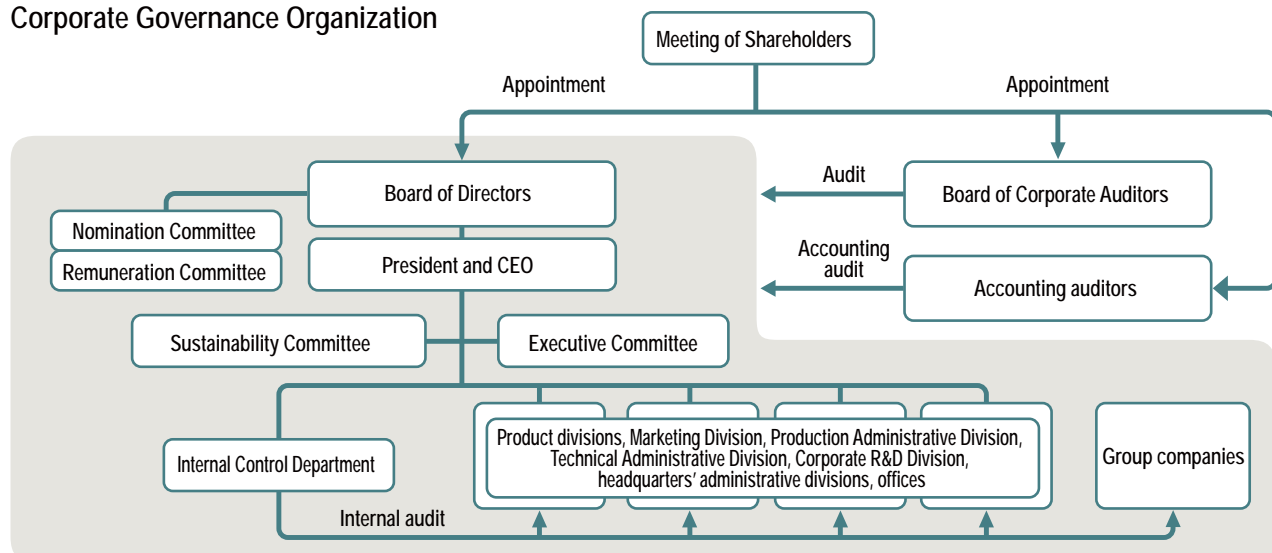
## Corporate Governance System

A company with internal auditors, DIC maintains a Board of Directors and a Board of Corporate Auditors. As well as appointing two highly independent outside directors, DIC has instituted an executive officer system, a move aimed at separating decision making and implementations thereby accelerating business executions, and at clarifying responsibilities. DIC also has a Nomination Committee and a Remuneration Committee, which include the two outside directors, to ensure objectivity in the nomination and selection of, and determining remuneration for, directors and executive officers. The four-member Board of Corporate Auditors, which includes two individuals—one a lawyer and the other an accounting scholar—as outside auditors, liaises with the accounting auditors and the internal auditing department.

## System of Internal Control

To ensure fair business practices, the Board of Directors has set a basic policy on internal control that encompasses, among others, compliance with laws and regulations and DIC's Articles of Incorporation, risk and information management and the creation of systems to foster business efficiency. Specific initiatives to date have included formulating a code of business conduct that encompasses a whistle-blowing system, various risk management initiatives implemented by the Sustainability Committee, the establishment of various internal rules and monitoring (internal control audits and environment and safety audits). The Board of Directors also hears annual reports on measures implemented in line with the policy on internal control.

## Corporate Governance Organization



# Overview of Materiality Analysis

The DIC Group conducts its operations in line with its mission, “Through constant innovation, the DIC Group strives to create enhanced value and to contribute to sustainable development for its customers and society.” In recent years, the Group has seen a rapid increase in requests from a broad range of stakeholders, including shareholders and institutional investors, regarding disclosure of financial and nonfinancial information. Stakeholders today place particular emphasis on information that measures performance from the perspective of critical ESG-related issues. Accordingly, the Group has abstracted and analyzed material issues, that is, issues with potential to affect its performance, and has identified those of particular significance.

In addition to ensuring proper prioritization, the DIC Group is taking steps to effectively and efficiently address these issues. Guided by its DIC108 medium-term management plan, which commenced in fiscal year 2016, and by its long-term growth scenario, the Group will continue working to ensure that these efforts are beneficial to the management of its businesses and that they respond to the expectations of stakeholders.

## (1) Materiality Analysis Process

### 1 Abstraction of Issues

DIC abstracted issues of particular significance for the DIC Group based on the Global Reporting Initiative (GRI)’s G4 Sustainability Reporting Guidelines; its own sustainability themes (Group sustainability initiatives take into account ISO 26000); and issues delineated in DIC108, The DIC WAY or added by Sustainability Committee members, which it divided into three groupings: Environment (E), society (S) and governance (including economic issues) (G).

### 2 Materiality Analysis

Sustainability Committee members and heads of business units that spearhead the implementation of initiatives related to sustainability themes played a central role in assessing the materiality of the abstracted issues. This assessment was carried out from the twin perspectives of importance to DIC Group businesses and importance to stakeholders. Based on this, and having reviewed the results of assessments conducted by senior management at Group business units in the United States, Asia and elsewhere, the Company determined materiality for the DIC Group.

#### (a) Material importance to DIC Group businesses

DIC assessed issues with the potential for current or future impact on DIC as an organization, giving consideration to both potential risks and business opportunities.

#### (b) Material importance to stakeholders

The DIC Group recognizes five key stakeholder groups (customers, suppliers, local communities and society, employees, and investors). Assessments looked at level of interest on the part of stakeholders and potential impact.

With the aim of accurately identifying challenges for individual business units, DIC began by analyzing materiality for one of its core businesses. The Company is currently conducting materiality analysis for the Group as a whole.

## (2) The DIC Group’s Materiality Matrix

DIC has organized the issues abstracted and assessed through the process outlined above into 22 DIC general materiality categories, as shown in the table below. The Company plans to periodically review and amend its analysis of materiality while incorporating the opinions of external stakeholders and will report on the progress of these activities as necessary in this document beginning in fiscal year 2017.

### The DIC Group’s 22 Materiality Categories

Environment (E)	<ul style="list-style-type: none"> <li>● Practical application of measures to reduce environmental impact</li> <li>● Contribution to the realization of a low-carbon society</li> <li>● Promotion of products and services that contribute to environmental protection</li> </ul>
Society (S)	<ul style="list-style-type: none"> <li style="width: 50%;">● Ability to foster and strengthen global human resources</li> <li style="width: 50%;">● Promotion of occupational health and safety and consumer health</li> <li style="width: 50%;">● Promotion of diversity</li> <li style="width: 50%;">● Contributing to colorful and comfortable lifestyles</li> <li style="width: 50%;">● Respect for human rights</li> <li style="width: 50%;">● Harmony with and contribution to society</li> <li style="width: 50%;">● Efforts to address needs engendered by an aging society and falling birthrates</li> <li style="width: 50%;">● Enhancement of brand strength/reputation (evaluation)</li> </ul>
Governance (including economic issues) (G)	<ul style="list-style-type: none"> <li style="width: 50%;">● Response to the growth of digital businesses</li> <li style="width: 50%;">● Provision of solutions</li> <li style="width: 50%;">● Response to economic globalization/efforts to reinforce governance</li> <li style="width: 50%;">● Innovation through compounding</li> <li style="width: 50%;">● Promotion of supply chain management</li> <li style="width: 50%;">● Efforts to strengthen global technology development capabilities</li> <li style="width: 50%;">● Improvement of quality management capabilities</li> <li style="width: 50%;">● Creation of next-generation businesses</li> <li style="width: 50%;">● Efforts to increase productivity</li> <li style="width: 50%;">● Promotion of open innovation</li> <li style="width: 50%;">● Efforts to reinforce marketing</li> </ul>



# Toward Fair and Transparent Corporate Activities

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Enhance awareness of compliance.	Hold presentations to explain the DIC Group Code of Business Conduct in local languages and set up an e-learning program to educate employees about the code.	Presentations to explain the DIC Group Code of Business Conduct were held at overseas Group companies in local languages. Regarding an e-learning program to educate employees about the code, an independent subcontractor was chosen and terms were confirmed.	★★	Create and commence implementation of a DIC Group Code of Business Conduct e-learning program. Create and commence implementation of a proposal for responding to Japan's Corporate Governance Code.
Conduct business fairly.	Continue to provide legal training pertaining to antitrust and anti-corruption legislation and establish a system to confirm compliance.	Legal training pertaining to compliance with antitrust and anti-corruption legislation was held on a continuous basis at overseas Group companies.	★★	Eliminate violations of antitrust, anti-corruption and other key legislation.

## Basic Approach to Compliance

Compliance in the DIC Group encompasses not only obeying laws but also acting in a manner that is in keeping with social norms and the expectations of customers, communities and other stakeholders. With the aim of ensuring sustainable growth for businesses that are both fair and transparent, DIC formulated the DIC Group Code of Business Conduct, a unified set of guidelines the adherence to which it considers to be the foundation of compliance. DIC compels all DIC Group employees to conduct themselves in accordance with the code.

## The DIC Group Code of Business Conduct

The DIC Group completed the DIC Group Code of Business Conduct in July 2014. The code not only mandates compliance with national laws and international rules but also presents 10 principles essential to the professional conduct of DIC Group employees. The DIC Group Code of Business Conduct has since been translated into 25 different languages to ensure that DIC Group employees worldwide share the Group's values and commit themselves to doing what is right, as well as to acting with common sense and an understanding of individual responsibilities, in all aspects of their work.

DIC Group Code of Business Conduct:  [http://www.dic-global.com/en/csr/pdf/code\\_of\\_business\\_conduct\\_en.pdf](http://www.dic-global.com/en/csr/pdf/code_of_business_conduct_en.pdf)

### 10 Principles Essential to Professional Conduct

- ① Your Rights as an Employee: Respect, Dignity, Privacy
- ② Environment, Safety and Health
- ③ Your Responsibility to Avoid Potential Conflicts of Interest and to Protect Group Property
- ④ Anti-Corruption and Anti-Bribery Policy
- ⑤ Your Relationship with Governments and Government Officials
- ⑥ Your Relationship with Customers, Suppliers, and External Third Parties
- ⑦ Money Laundering and Anti-Terrorism
- ⑧ Forced Labor, Child Labor, Conflict Minerals
- ⑨ Insider Trading
- ⑩ Proper Accounting and Internal Controls Relating to Financial Reporting

## Initiatives to Promote Compliance

In addition to the DIC Group Code of Business Conduct, the Group promotes compliance through the following initiatives:

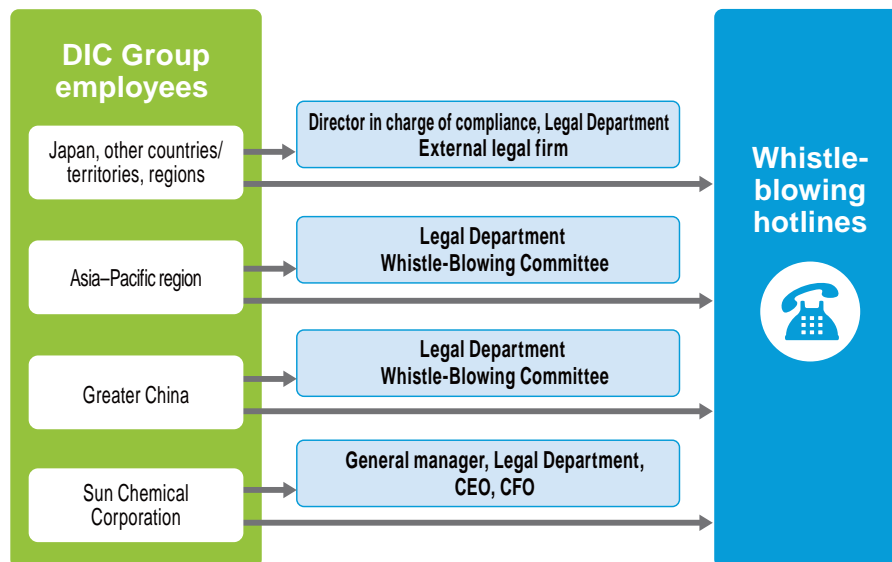
- ① Provision of training focused on legal issues to improve compliance awareness for employees at point of hire, when promoted and before overseas transfers
- ② Appointment of compliance officers at all regional headquarters—DIC Corporation (Japan), Sun Chemical Corporation (the Americas and Europe), DIC (China) Co., Ltd. (the PRC) and DIC Asia Pacific Pte Ltd (Asia and Oceania)—to spearhead global compliance efforts

The DIC Group vows that it will not violate the principles of the DIC Group Code of Business Conduct, even if such a violation would appear to profit the Group. As a corporate citizen, the Group also pledges to respect social norms and act in a sound and socially acceptable manner.

## Establishing and Operating a Whistle-Blowing System

The DIC Group has established a whistle-blowing system through which one can directly report an issue or question regarding compliance to the division responsible for compliance. Since fiscal year 2014, the Group has maintained whistle-blowing hotlines that can handle reports in the languages of more than 160 countries. The Group has also devised strict rules under this system to protect whistle-blowers from retaliation, and is working to ensure the system functions in a proper manner.

When a report is received, the Group responds swiftly and appropriately, giving due consideration for pertinent laws while also incorporating internal and external opinions, to promptly identify and correct misconduct and other compliance violations as quickly as possible.



## Antitrust and Anti-Corruption Legislation

The DIC Group has formulated a basic policy to comply with antitrust legislation and made Groupwide efforts to ensure fair business practices. The DIC Group Code of Business Conduct includes rules for complying with antitrust legislation and prohibits involvement in bribery or corruption. Since fiscal year 2014, the Group has held 160 presentations regarding antitrust and anti-corruption legislation for relevant employees to ensure strict compliance with the laws of the countries and territories in which it operates.

## Promoting Compliance with Legislation Regarding the Timely Payment of Subcontractors

With the aim of enhancing understanding of the importance of appropriate and fair transactions with subcontractors, the Legal Department held presentations on legislation regarding the timely payment of subcontractors for the purchasing departments of domestic DIC Group companies that incorporated case studies. In January 2016, DIC prepared the Manual for Internal Auditing of the DIC Group's Compliance with Japan's Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors and standardized audit procedures, thereby creating a framework for conducting audits in a more efficient manner. The Group also encouraged employees in related positions to participate in programs sponsored by external organizations, including a workshop on promoting adherence to the Act sponsored by the Japan Fair Trade Commission and the Small and Medium Enterprise Agency.



# Reducing Business Risks and Preventing the Recurrence of Incidents

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Ensure business continuity for the DIC Group.	<ul style="list-style-type: none"> <li>Encourage awareness of the new risk management policy across the DIC Group. Explore realistic and effective ways to operate the risk management system.</li> <li>Ensure product division BCPs align with systematic training based on task force response manuals.</li> </ul>	<ul style="list-style-type: none"> <li>Took every opportunity to raise awareness of risk management policy and system at all plants and Group companies and elsewhere in the organization.</li> <li>The Risk Management Subcommittee assigned a risk owner to each of 15 risks identified to undertake measures. Reduced risks in many themes.</li> <li>For each product, renewed BCPs and undertook training and other activities.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Foster risk management for each Group company, mainly through the Risk Management Subcommittee.</li> <li>Regarding governance at subsidiaries, prepare a system that incorporates internal controls.</li> <li>Continue to prepare and renew BCPs and implement training to enhance viability. Prepare and renew manuals and plan and undertake various training programs to ensure that the headquarters crisis management system functions effectively.</li> </ul>

## Basic Approach to Risk Management

The DIC Group undertakes risk management initiatives with the aim of appropriately and flexibly addressing changes in its operating environment and the diversification of risks, and of swiftly mitigating damage. The Group recognizes risks in three principal categories: externally caused risks that are beyond its control, corporate risks that can be prevented and business risks that should be handled by the relevant division/departments. The Risk Management Subcommittee, which is a subordinate committee of the Sustainability Committee, oversees management of these risk responses.

## Risk Management Policy

The DIC Group first introduced risk management initiatives in 2001 by creating the Compliance Committee and setting up reporting channels. Following the establishment of the Risk Management Subcommittee in May 2012, the Group undertook initiatives aimed at responding to serious natural disasters and promoting business continuity management (BCM). Since fiscal year 2014, the Risk Management Subcommittee has focused on establishing a risk management policy and a risk management system, efforts that are designed to further enhance corporate value Groupwide. In a bid to ensure the effective and sustainable implementation of initiatives, in January 2015 the Group introduced a newly formulated risk management policy.

### Risk Management Policy

#### 1 Risk management objectives

The DIC Group undertakes risk management initiatives with the aim of appropriately and flexibly addressing changes in its operating environment and the diversification of risks, and of swiftly mitigating damage.

#### 2 Definition of risk and risk management

The DIC Group's definition of risk and risk management is as follows:

1. Risk: All uncertainties that threaten the DIC Group's sustainability and business goals.
2. Risk management: Initiatives to enhance corporate value by managing all risks to the DIC Group from a Groupwide perspective.

#### 3 Risk management initiatives

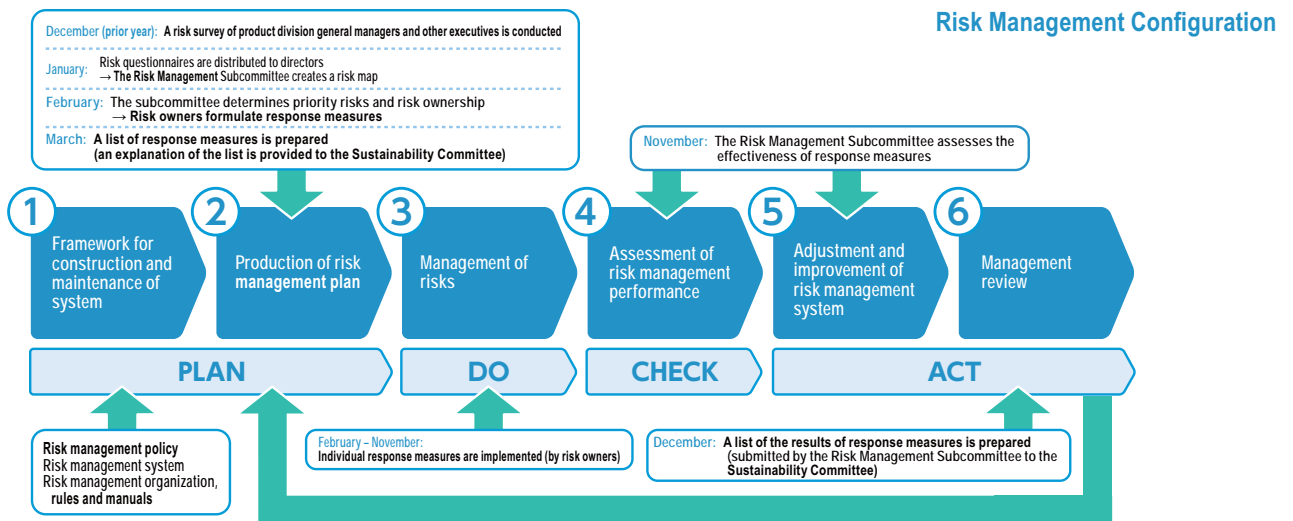
1. The DIC Group comprehensively evaluates all risks based on their potential impact on operations and likelihood of occurring, among others, and prioritizes systematic and effective responses.
2. The DIC Group constructs and validates risk management systems by repeating the plan-do-check-act (PDCA) cycle.
3. The Risk Management Subcommittee shares responsibilities with the risk management teams of individual businesses to properly deploy risk measures within the DIC Group. The subcommittee regularly reports on its activities to the Sustainability Committee.

DIC Corporation

## Risk Management System

In the process of formulating the risk management policy, the Risk Management Subcommittee established the DIC Group Risk Management System. This system starts by identifying key risks through a questionnaire, sustainably reducing risks by encouraging the use of the PDCA cycle and having management drive improvements and assessments. The Group has positioned fiscal years 2014 and 2015 as the first phase of Groupwide risk management initiatives predicated on the new system. Administrative divisions in DIC's corporate headquarters in Japan, which together constitute the Risk Management Subcommittee, and other divisions/departments, which are organized vertically according to function, will determine departments to oversee key risks and deploy countermeasures by collaborating with other relevant departments.

Having commenced risk management initiatives in Japan, DIC is expanding the focus of such efforts while at the same time promoting awareness of its basic risk management policy and the risk management system across the global DIC Group.



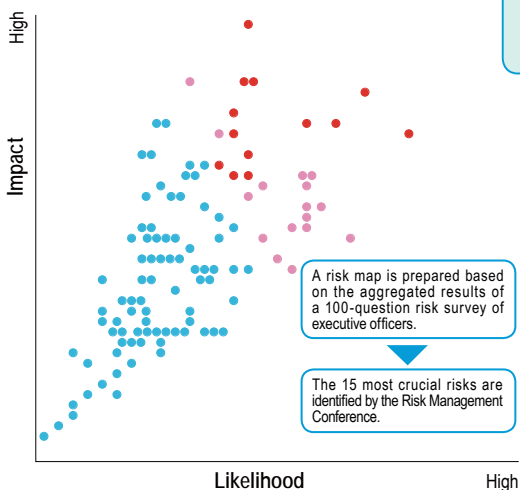
## The DIC Group's Perspective on Risk

### Risk Definition and Risk Owners

The DIC Group recognizes risks in three principal categories. The Group manages these risks by clarifying specific risk owners, which are the divisions/departments responsible for implementing responses.

	Risk categories	Main risk owners
<b>Business activities</b>	<p><b>Risks that should be dealt with by relevant departments</b></p> <p>These are risks to be considered in the course of conducting business, including those that affect production, development, investment and procurement.</p>	<ul style="list-style-type: none"> <li>Product divisions</li> <li>Production and technical administrative divisions</li> <li>Purchasing departments</li> </ul>
<b>Corporate risk management activities</b>	<p><b>Risks that should be dealt with by specialized departments</b></p> <p>Unlike risks that should be dealt with by relevant departments, these are risks that affect all Group business activities and can be addressed at the corporate level. Examples include risks related to information management and legal and regulatory compliance.</p>	<ul style="list-style-type: none"> <li>Corporate headquarters' administrative divisions</li> <li>Corporate planning departments</li> </ul>
	<p><b>Risks beyond control</b></p> <p>These are risks arising from natural events and social circumstances.</p>	<ul style="list-style-type: none"> <li>Risk Management Conference</li> <li>Corporate headquarters' administrative divisions</li> <li>Sites</li> </ul>

### Risk Map



### 12 Major Risks for which the Risk Management Subcommittee Has Adopted Response Measures

- Currency and interest rate fluctuations
- Intellectual property
- Governance of subsidiaries
- Product liability
- Pandemics
- Economic swings
- Decline in debt ratings
- Information security
- Operations of overseas business units
- Significant natural disasters
- Facility-related accidents
- Ability to foster human resources and pass on skills

## BCM

Drawing on lessons from the Great East Japan Earthquake, the DIC Group now accounts for all risks with the potential to interrupt business continuity through BCM. These risks include natural disasters such as large earthquakes and floods; influenza and other pandemics; explosions, fires, leaks and other plant accidents; and major corporate scandals. The Group comprehensively estimates the probability of each risk and its impact on management, prioritizing response measures for more significant risks.

In Japan, which is currently experiencing an active period in terms of volcanic and seismic activity, the Group deploys ongoing natural disaster response measures. These include maintaining headquarters functions and task force framework, support measures for disaster-stricken areas, and producing and renewing BCPs for each key product. The Group facilitates and maintains a system to maintain business continuity through training drills. These encompass drills for safety confirmation, emergency radio warnings, comprehensive disasters, disaster map exercises and business continuity plans (BCPs).



Task force drill



## Reinforcing Governance at Subsidiaries

The DIC Group endeavors to reinforce governance at subsidiaries, and has constructed an organizational operations support framework to ensure effective management of subsidiaries as well as foster their sustainable growth. The Group also facilitates and maintains internal controls as a risk management system that matches business scale, characteristics and other features distinctive to each subsidiary.

## VOICE from the DIC Group

### We are advancing BCP initiatives by holding response simulation meetings.

For a long time, the Saitama Plant was the Group's only facility producing LCs. In November 2013, we established a second LC production facility, in Qingdao, in the PRC, to accommodate business globalization and increased BCP requirements from customers. While these plants normally produce LCs with different product numbers, they are in fact mutually interchangeable as their facilities are basically the same. We resolved to fully harness the capabilities of the two facilities by rolling out BCP activities at the Qingdao Plant beginning in fiscal year 2015. Local understanding of BCPs was initially very low, but we created a manual based on the one in use at the Saitama Plant, heeding advice that what is important is to keep anticipating risks and considering effective ways to address them. We are endeavoring to embed BCP activities as part of the culture at the Qingdao Plant by conducting regular meetings to simulate addressing individual risks.

Manager in charge of global production, Liquid Crystal Material Supply Department, Saitama Plant **Takumi Yanagida**



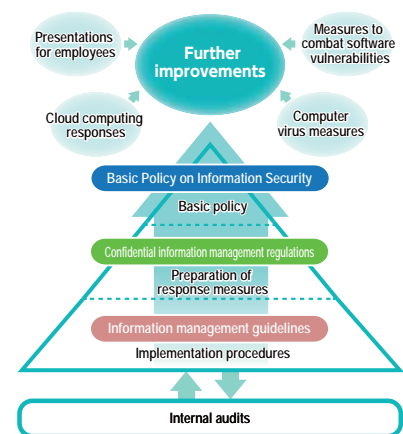
# Initiatives to Ensure Information Security

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Establish a global information security framework.	<ul style="list-style-type: none"> <li>In the Asia-Pacific region and Greater China, have regional headquarters deploy rules and guidelines for the subsidiaries they oversee.</li> <li>Identify fits and gaps for basic information security policies between the Sun Chemical Group and DIC and consider ways to deploy policies.</li> <li>Maintain/improve rules and guidelines in Japan by considering revisions and making updates to key rules.</li> </ul>	<ul style="list-style-type: none"> <li>Regional headquarters in the Asia-Pacific region completed the deployment of rules and guidelines for the subsidiaries they oversee. The deployment is expanding in Greater China.</li> <li>A comparative study of information security rules, standards and promotion systems between the Sun Chemical Group and DIC is currently under way.</li> <li>ICT-related usage rules, which are ancillary to guidelines in Japan, were revised to reflect changes in the business environment.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Support ongoing efforts to uphold and deploy information security management configurations for the Asia-Pacific region and Greater China.</li> <li>Promote ongoing measures to achieve consistency between the Sun Chemical and DIC Group information security guidelines and management configurations and encourage application.</li> <li>Revise and enforce rules that respond to the growth of cloud computing and other new ways of sharing information.</li> </ul>

## Basic Approach to Information Security

The DIC Group has positioned information security as a key management priority, and established a Basic Policy on Information Security, which is founded on its recognition that protecting information assets that belong to or are managed by the Group is essential to its ability to conduct business. In line with this policy, the Group formulated and deployed confidential information management regulations, and information management guidelines. These were prepared to ensure that directors and employees properly use the Group's information assets in the course of business and appropriately handle confidential information. The Group will pursue continued improvement by conducting internal audits and confirming current issues to identify risks.



## Globally Maintaining and Enhancing Information Security

The DIC Group's regional headquarters for the Asia-Pacific region and Greater China, which are located, respectively, in Singapore and in the PRC, are spearheading the deployment of confidential information management regulations and information management guidelines and developing information management systems. In Europe and the United States, the DIC Group is reinforcing information security by sharing IT infrastructure risks, while in Japan the Group is updating rules to address security threats arising from cloud computing, smart devices\* and other emerging technologies, and intends to continue revising rules in light of changing work practices and other developments attributable to the progress of digitization. Preparations are also under way to deploy an e-learning program regarding the information management guidelines Groupwide.

\* "Smart device" is a generic term for information devices other than PCs, mainframe computers, workstations and other conventional computing platforms.

## Safeguarding Information Security Environments in Asia and Oceania

In fiscal year 2015, the DIC Group began building a unified security system across Asia and Oceania with the aim of, among others, combating computer viruses and software vulnerabilities. Through these and other efforts, the Group continues working to safeguard information by reinforcing information infrastructure.

### VOICE from the DIC Group

#### Our efforts focus on enhancing information security in Southeast Asia and Oceania.

I help enhance IT environments in Southeast Asia and Oceania, including maintaining and improving information security, consolidating IT infrastructure and further aligning and expanding the operational and maintenance structure of our SAP system.

Because we are in charge of overseeing subsidiaries in the region, we sought to deploy confidential information management regulations, as well as information management guidelines, among regional subsidiaries. As a regional headquarters that coordinates 16 subsidiaries in 10 countries with diverse cultures and customs, we will continue working to improve information security by, among others, unifying security measures in the region.



Regional Chief Information Officer, DIC Asia Pacific Pte Ltd **Hidefumi Ito**



# Promoting Responsible Care

## Basic Philosophy

As a company that manufactures and sells chemical substances, DIC sets standardized safety regulations for ESH initiatives. The Company is working to exceed regulatory standards and fully disclose results. Annual measures augment its core policy.

## Initiatives to Date

Having established its Principle and Policy for the Environment, Safety and Health in 1992, in 1995 DIC pledged to implement the precepts of Responsible Care. Since reaffirming its support for Responsible Care management in January 2006 by signing the CEO's Declaration of Support for the Responsible Care Global Charter, the Company has promoted constant improvements. In 2014, DIC renamed its Principle and Policy for the Environment, Safety and Health the Policy for the Environment, Safety and Health. The name was subsequently revised to the Environment, Safety and Health Policy.



DIC is a signatory to the International Council of Chemical Associations' Responsible Care Global Charter

## Environment, Safety and Health Policy

As a responsible corporate citizen and as a company that manufactures and sells chemical substances, DIC recognizes that care for the environment, safety and health is fundamental to the management of the Company. DIC is committed to the concept of sustainable development in all aspects of its businesses and contributes to the global environment, including biodiversity, by creating environmentally sound products and technologies.

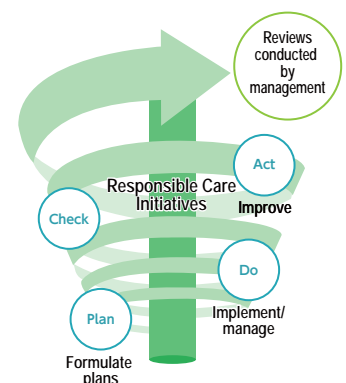
- 1 We take responsibility for the environmental, safety and health implications of products throughout their life cycles.
- 2 We continuously set goals and targets for environmental, safety and health improvements.
- 3 We comply strictly with laws, regulations and agreements relative to the environment, safety and health. For countries lacking such laws, we prioritize safe operations and protection of the environment.
- 4 We systematically provide education and training on the environment, safety and health.
- 5 We prepare systems and audit internally to benefit the environment, safety and health.

We disclose these policies internally and externally and ask that all DIC Group companies observe them. The abovementioned "safety" also encompasses security and disaster prevention.

## Applying the PDCA Cycle to Eight Responsible Care Codes

The DIC Group manages its Responsible Care initiatives in a uniform manner using a management system comprising eight codes, six of which are mandated by the Japan Responsible Care Council (the first six codes listed) and two of which were devised internally (the seventh and eighth codes listed). In undertaking these initiatives, DIC and DIC Group companies leverage the Group's ISO 14001-certified environmental management system. In addition to using these two systems, certain overseas Group companies are also working to secure ISO certification for their occupational health and safety management systems through ongoing efforts to enhance their Responsible Care capabilities.

- 1 Environmental protection (continuous reduction of chemical emissions)
- 2 Process safety and disaster prevention (prevention of fires, explosions and the discharge of chemicals)
- 3 Occupational safety and health (protection of the safety and health of employees)
- 4 Chemical and product safety (management of risks associated with chemicals)
- 5 Safety in logistics (reduction of chemical risks associated with the distribution of chemicals)
- 6 Dialogue with society (communication with local communities regarding the environment, safety and health)
- 7 Compliance (strengthening export security control and detection framework and fostering of officers responsible for chemical substance regulatory information)
- 8 Management system (for unifying the above codes as a system)



## Annual Activity Plan

The DIC Group formulates annual Responsible Care activity plans, translating them into English and Chinese. Based on the activity plan for fiscal year 2015, the Group ensures specific activity plans for Group companies operating in each region to promote Responsible Care initiatives and thereby contribute to an environment-oriented society through its manufacturing activities.

## Initiatives in Fiscal Year 2015

During the term, the DIC Group engaged in Responsible Care initiatives based on the following plan.

### The DIC Group's Responsible Care activity plans for fiscal 2015:

- *Occupational health and safety/disaster prevention*

In line with the DIC Group's ultimate objective, which remains the achievement of "zero occupational accidents," set targets for reducing the incidence of occupational accidents for fiscal year 2015 at on a regional basis (Japan, Greater China, the Asia-Pacific region and the Sun chemical Group and implement related initiatives.

- *Environmental protection*

In line with the DIC Group's goal of reducing its impact on the environment, set targets for and implement initiatives aimed at reducing environmental impact on a regional basis (Japan, Sun Chemical Group, Greater China and the Asia-Pacific region).

- *Safety in logistics*

Promote the provision of information pertinent to the safe transport of chemical substances.

- *Chemical substance and product safety*

Provide stakeholders with information to facilitate the appropriate handling of products throughout their life cycles.

- *Dialogue with stakeholders*

Report on the results of the DIC Group's Responsible Care initiatives via the DIC Report.

- *Management system*

Make use of the PDCA cycle in promoting Responsible Care initiatives .

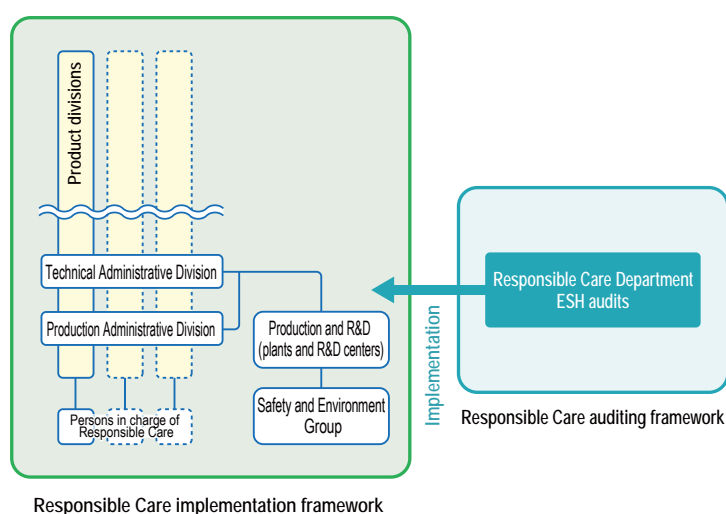
- *Compliance*

Comply with environmental and ESH- and quality-related laws, rules and agreements.

## Framework for Promoting Responsible Care

Each year, the DIC Group defines priority issues to address and uses the PDCA cycle in voluntary initiatives at the Group company, plant and research laboratory levels. The Responsible Care Department provides support for these initiatives to advance their progress and conducts regular audits to ensure compliance and improve safety and environmental performance.

### Framework for Promoting Responsible Care



## Support for Group Company Initiatives

The Responsible Care Department provides wide-ranging support to domestic and overseas Group companies (a total of 51 business sites), regardless of size, the goal being to enhance Responsible Care initiatives Groupwide.

Information Disclosure and Dialogue with Stakeholders

The DIC Group strives to increase the transparency of its activities through the active disclosure of information and at the same time to raise the level activities by promoting dialogue with stakeholders. Specific efforts include providing safety- and environment-related data through websites, the DIC Report and other media, as well as actively engaging with society, including through the holding of community meetings.

Responsible Care Auditing

Basic Approach

Responsible Care Department specialists with expertise, experience and auditing capabilities regularly collaborate with executive officers to audit Responsible Care initiatives at Group companies. DIC's president and CEO and the executive vice president take part in ESH audits at many sites each year to enhance Responsible Care performance across the DIC Group.

Overseas, Responsible Care Department specialists and regional ESH officers assess the progress of efforts at production sites and work together to enhance the effectiveness of Responsible Care initiatives.

Audits in Fiscal Year 2015

In line with a goal of strengthening Responsible Care management across the DIC Group, its Responsible Care officers have audited domestic consolidated Group companies since fiscal year 2014 to verify efforts and support improvement activities. In fiscal year 2015, the Group conducted Responsible Care audits at 13 domestic Group companies. The audits were equivalent to those for parent company sites. It also conducted regular safety and environment audits at nine DIC sites and four DIC Graphics sites to strengthen collaboration between domestic Group companies and verify Responsible Care activities.

Similar efforts are also under way at overseas Group companies. Audits have become more stringent every year. Fiscal year 2015 saw Responsible Care audits at 14 companies in Greater China and three in the Republic of Korea (ROK). As well as assessing the operational status of management systems, the audits included a greatly improved self-assessment checklist that covered 35 questions for seven items in environment, health and occupational safety. The Group thus confirmed that each unit had progressed steadily through application of the PDCA cycle.

The Group invited ESH managers spearheading Responsible Care activities to DIC headquarters to enhance their skills, notably by having them attend audits of domestic Group companies and participate in training courses. In fiscal year 2015, there was one violation of environmental regulations overseas\*.

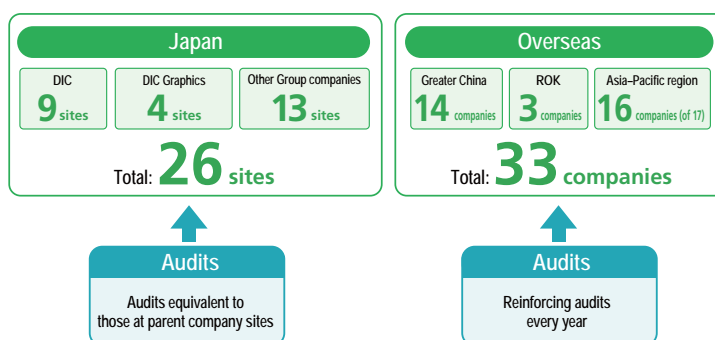
\* A violation with a penalty exceeding \$10,000

Outline of ESH Audits for Fiscal Year 2015



A far more detailed self-assessment checklist for Taiwan (Greater China)

DIC (Taiwan) Ltd. and DIC Graphics Chia Lung Corp.



VOICE from the DIC Group

We are seeing clear improvements among DIC Group companies.

We have expanded the deployment of ESH management systems at companies, previously limited to Japan, to DIC Group companies overseas, and have enhanced benchmarks to facilitate objective comparisons. In ESH audits, we encourage improvements by verifying self-assessments from third-party perspectives. Group companies have clearly progressed solidly over the past few years in terms of awareness and behavior. We look forward to working with colleagues across the Group to set ever-higher targets and respond to society's expectations.



Manager in charge of environment and safety, Responsible Care Department Takeshi Hosomi

# Occupational Safety and Health, Security and Disaster Prevention

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Ensure occupational safety and health. Promote hands-on safety training.	<ul style="list-style-type: none"> <li>Continue to promote the improvement of risk assessment skills.</li> <li>Share and make effective use of accident-related information across the DIC Group.</li> <li>Expand the number of hands-on safety training categories and enhance occupational safety and health training.</li> </ul>	<ul style="list-style-type: none"> <li>Assessments were promoted at domestic DIC Group companies in line with risk assessment guidelines.</li> <li>Causes of accidents were analyzed and information was provided in a timely manner.</li> <li>Created more compact equipment for mobile hands-on safety training and stepped up training for lecturers.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Introduce and promote chemical substance risk assessments.</li> <li>Share and make effective use of accident-related information across the DIC Group.</li> <li>Continue to conduct hands-on safety training.</li> <li>Implement mobile hands-on safety training with new equipment.</li> </ul>
Promote the sharing of information on safe working environments among DIC Group companies in Japan and overseas.	<ul style="list-style-type: none"> <li>Continue the activities of the Safe Corporate Climate Cultivation Working Groups.</li> <li>Share safety information at working group meetings.</li> </ul>	<ul style="list-style-type: none"> <li>Produced an illustrated version of <i>Principles of Safe Conduct</i> in multiple languages (for workplace reading circles, in which employees gather to take turns reading passages from a specific document aloud, thereby reinforcing understanding, and to discuss issues).</li> <li>Various types of safety information were exchanged.</li> </ul>	★★★	<ul style="list-style-type: none"> <li>Continue the activities of the Safe Corporate Climate Cultivation Working Group.</li> <li>Promote employee rank-specific training.</li> </ul>
Ensure the safe management of chemical substances during transport.	<ul style="list-style-type: none"> <li>Formulate measures for preventing problems during transport and deploy across the DIC Group.</li> <li>Promote safety management in the transport of chemical substances.</li> </ul>	<ul style="list-style-type: none"> <li>The code framework was reviewed to facilitate the identification of Yellow Card numbers on delivery slips.</li> <li>Training based on potential problems during transport was offered.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Formulate measures for preventing problems during transport and deploy across the DIC Group.</li> <li>Promote safety management in the transport of chemical substances.</li> </ul>
Encourage the safety and environmental management initiatives of Group companies in Greater China and the Asia-Pacific region.	<ul style="list-style-type: none"> <li>Expand the number of sites offering hands-on safety training.</li> <li>Continue to hold meetings for personnel in charge of safety. (Switch from biennial to annual meetings in Greater China and the Asia-Pacific region.)</li> <li>Continue to conduct safety and environmental audits and enhance the competence of ESH coordinators.</li> <li>Provide support for autonomous ESH management efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Held improvement lectures for local exhaust ventilation devices in Greater China.</li> <li>Held three meetings for safety personnel in Greater China and the Asia-Pacific region (a total of 50 companies participated).</li> <li>Conducted ESH audits at 14 companies in Greater China, three in the ROK and 16 in the Asia-Pacific region.</li> </ul>	★★★	<ul style="list-style-type: none"> <li>Introduce and promote DIC risk assessments in Greater China and the Asia-Pacific region.</li> <li>Continue the ESH audits and support better self-management.</li> </ul>
Manage safety and environmental data.	Continue to assist the efforts of subsidiaries in the Asia-Pacific region and in Greater China designated as being in need of special safety-related support.	<ul style="list-style-type: none"> <li>Produced monthly reports on ESH data for Greater China, the Asia-Pacific region and the Sun Chemical Group.</li> <li>Efforts to assist three Group companies in the Asia-Pacific region and four in Greater China designated as being in need of special safety-related support continued.</li> </ul>	★★	Continue to collect safety and environmental data from Greater China, the Asia-Pacific region and the Sun Chemical Group.

## Occupational Safety and Health

### Prioritizing Safe Operations

The DIC Group recognizes that operational safety is fundamental to its operations and is also a core component of Responsible Care. Accordingly, the Company undertakes occupational safety and health, security and disaster prevention method measures to foster a “safety first” philosophy Groupwide and in the mind of every employee.

Because its manufacturing operations span diverse fields, the DIC Group has numerous production processes that use hazardous and toxic materials and rotating devices, including ones that do not involve chemical reactions. Any accident involving such materials or devices has the potential to significantly impact society in general and damage the health of the Group and partner company employees and local residents.

With the aim of preventing such accidents, the DIC Group places a high priority on reducing risks in the workplace by enhancing awareness of *Principles of Safe Conduct* and training safety personnel. The Group strives to enhance safety through efforts to reinforce its safety infrastructure and create a safety-oriented corporate culture.

## Basic Approach

As a responsible member of society and a company that manufactures and sells chemical substances, the DIC Group recognizes that proper consideration for ESH is fundamental to its operations and works to incorporate this awareness into all of its business activities. Guided by this philosophy, the DIC Group analyzes accidents and communicates information thus derived, based on which it undertakes risk assessment with the aim of ensuring occupational safety and health.

## Principal Initiatives in Fiscal Year 2015

### 1 Making Regional Data Visible with Monthly Reports

The DIC Group conducts its diverse businesses in accordance with a wide range of national and regional legal systems, working environments and practices. The risk of accidents and disasters varies from one industry to another because of differences in the facilities, machinery and raw materials used. For Group companies to work as one to improve occupational safety and health, it is therefore crucial to establish appropriate benchmarks for each region (Japan, Greater China, the Asia-Pacific region and the Americas and Europe).

DIC defines accidents, disasters and reporting procedures for each region, as well as gathered and shared statistical information related to occupational safety, including employee numbers, working hours, number of accidents leading to workdays lost, number of accidents not leading to workdays lost, number of accidents involving fires/explosions, workdays lost, workdays lost before restart of operations, occupational accident frequency rate, occupational accident severity rate, work days lost per thousand employees and workdays lost per million work hours. This approach made it possible to objectively compare the operational safety of individual Group companies, establish more precise targets and facilitate improvement programs.

In fiscal 2015, DIC established a system to aggregate monthly occupational safety and health data for each company in Greater China and the Asia-Pacific region as a monthly report. Domestic Group companies already had such a setup in place. This made it easier to swiftly identify and compare working hours, the numbers of accidents leading to workdays lost, occupational accident frequency rates and other monthly data for the Sun Chemical Group, Greater China, and the Asia-Pacific region, thereby facilitating smoother Groupwide management. By drawing on these benchmarks, DIC will further enhance regional performances in fiscal year 2016 and beyond.

Monthly report

### 2 Reducing Risks

By understanding potential risks in production processes, facilities and devices, and the hazards of chemical substances, the DIC Group systematically prepared initiatives to prevent accidents and occupational injuries. The Group also creates risk assessment guidelines when deploying new or modified equipment or changing production processes to continue risk reduction activities.

## VOICE from the DIC Group

### More visible data should increase awareness.

I expect operations in Greater China and the Asia-Pacific region to objectively evaluate their strengths and weaknesses from the monthly reports so that they can improve themselves and bolster their activities. The occupational accident frequency rate (number of workdays lost per million work hours) is an important benchmark for the DIC Group. More visible data will likely translate into results by motivating each company into action. Collaboration between DIC and regional Group companies should ultimately enhance overall Responsible Care activities by reflecting barometers from more specific improvement efforts.



Senior Manager, Responsible Care Department **Masashi Hayakawa**

### 3 Training Skilled Safety Personnel to Predict Risks

The DIC Group regularly trains skilled safety personnel on how to handle chemical substances, using materials such as its *Principles of Safe Conduct* and *Environment and Safety Guidelines for the R&D Department*, as well as safety data sheets (SDSs) and its Occupational Accident Case Studies database. In recent years, the Group has focused especially on a risk prediction training technique called Kiken Yochi Training (KYT) (“hazard prediction training”) and on hands-on safety training for employees of Group companies worldwide.

The Group also undertakes similar initiatives at production sites in Greater China and the Asia–Pacific region. In the ROK and Malaysia, local employees have voluntarily translated *Principles of Safe Conduct*. Headquarters has already translated the *Principles of Safe Conduct* into English and Chinese, using it throughout Greater China and the Asia–Pacific region.

KYT is a constructive way to further increase safety awareness. Domestic DIC Group companies use the technique extensively, and the Group is working to accelerate its deployment in Greater China and the Asia–Pacific region.

### 4 Promoting Hands-On Safety Training

Hands-on safety training is an effective alternative to classroom-based learning that uses actual equipment to simulate potential risks in the workplace, thereby heightening employees’ awareness of the importance of proper safety. In Japan, the DIC Group initiated a full-fledged hands-on safety training program in 2012, and has offered training that bases simulations on previous accidents, including those involving being caught in machinery, electrical discharges or fires from static electricity.

In 2014, the Group opened the Saitama Hands-On Safety Training Center, a facility boasting equipment that allows the simulation of an array of accidents, with the goal of fostering skilled safety personnel by incorporating training in new employee and rank-specific training programs. DIC’s Chiba, Sakai, Hokuriku, Saitama, Kashima and other plants have established their own hands-on safety training equipment and curricula to further embed safety into the DIC Group culture.

In light of frequent accidents at domestic production facilities that involved employees with fewer than three years of experience, the DIC Group included safety training and KYT in the training curricula for new employees in fiscal year 2014. There have been no reported occupational accidents involving new employees since then.

In fiscal year 2015, the Group downsized six types of hands-on equipment for a mobile initiative and raised the standards of lecturers.



A downsized hands-on machine for static generation and control



KYT at the Saitama Hands-On Safety Training Center



Experiencing being caught in a chucking apparatus

Overseas Group companies are also deploying hands-on safety equipment. Installations in Greater China have included those at Nantong DIC Color Co., Ltd., a manufacturer of printing inks and organic pigments; DIC Graphics (Guangzhou) Ltd., which manufactures printing inks; and Changzhou Huari New Material Co., Ltd., a synthetic resin manufacturer. In the Asia–Pacific region, there have been installations at DIC Graphics Chia Lung, a Taiwanese manufacturer of printing inks; DIC Compounds (Malaysia) Sdn. Bhd.; and PT. DIC Graphics in Indonesia, a manufacturer of printing inks. As well as providing regular hands-on safety training for local employees, these sites offer education for safety instructors.

#### Number of Hands-On Safety Training Participants in Fiscal Year 2015

Domestic DIC Group (held 22 times)	Greater China (four companies)	Asia–Pacific region (four companies)
<b>380</b>	<b>347</b>	<b>388</b>

## 5 Holding Safety Officers' Conferences in Greater China and the Asia-Pacific Region

DIC undertakes support initiatives at overseas Group companies by holding safety officers' conferences in Greater China and the Asia-Pacific region. These efforts provide opportunities for local DIC Group company safety officers to discuss issues and share information. Conference participants exchange views on initiatives in such areas as safety performance and progress in deploying safety management systems, introduce best practice case studies, and discuss ways to enhance the effectiveness of safety training and education and environmental protection initiatives. They also take part in hands-on safety training to gain experience that they can later apply when at their own workplaces.

From fiscal year 2015, DIC began holding these conferences every year instead of biannually. During the period, gatherings were convened in Guangzhou in March, Vietnam in October and Qingdao in December. The conferences featured submissions and adoptions of monthly reports, management by objectives (MBO) based on risk assessments, and reporting on progress with priority items and action plans. They also included the use of self-assessment check sheets, poster sessions presenting good practices, and theme-specific group discussions, which DIC hopes will stimulate discussion and deepen the exploration of key issues.



Asia-Pacific region safety officers' conference (Vietnam, October 2015)



Why-why analysis training at Greater China safety officers' conference

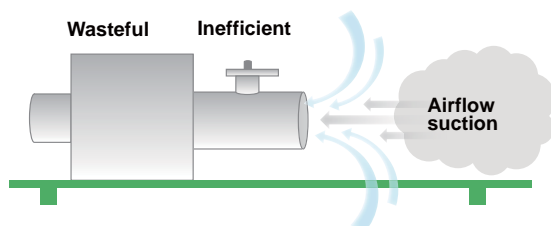
### TOPIC

#### Improvement Lecture for Local Exhaust Ventilation Device

As production sites engage in numerous processes, including those using organic solvents, the Group keeps workplaces safe and healthy by installing local exhaust ventilation devices as needed to ventilate from airflow suction through combustion and emissions. There had, however, been instances of setups not functioning fully owing to the positions and shapes of exhaust ducts.

The Responsible Care Department responded by creating a compact model comprising a blower, exhaust duct and hood. From fiscal year 2013, the department installed this model at 10 domestic plants as part of hands-on safety education to promote understanding of the structure, functions and features of local exhaust ventilators. It encouraged employee improvements by explaining how airflow suction (in terms of wind speed and odor) improves by 20% to 30% when a flange is attached.

In fiscal year 2015, the Group explained the principle of local exhaust ventilators by using a unit at safety officers' conferences in Greater China and the Asia-Pacific region. The unit is currently travelling from Qingdao to Nantong, Guangzhou and other production sites.



Smoke tester shows that air current drifts in from behind the duct cross-section



Compact model with flange for demonstrations



Mobile lecture in Qingdao

## VOICE from the DIC Group

### Understanding principles enables us to make independent improvements.

Equipment operators are often happy with the status quo if equipment works well. Local exhaust ventilators are a typical example. If operators better understand the principles, however, they no longer need to use huge fans so much. That is because they can improve the effectiveness of these units by repositioning air inlets and attaching hoods. So, while improving safety and health they can also cut energy consumption. We will continue to support production sites' voluntary improvements by helping them to better understand the importance of considering challenges from different angles.



Manager in charge of environment and safety, Responsible Care Department **Takeshi Hosomi**

## Status of Occupational Accidents

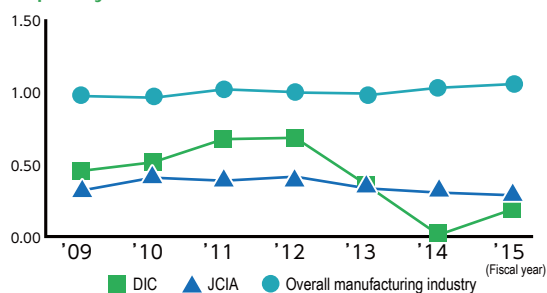
In fiscal year 2015, the number of occupational accidents at DIC and DIC Group companies in Japan increased by one each (since fiscal year 2008, the DIC Group has deployed the DART rate\*, a common indicator used in various countries, with the aim of improving the effectiveness of its safety initiatives). There was one fatal accident at a DIC Group unit overseas. The Group will continue to promote occupational safety and health initiatives going forward with the aim of preventing the occurrence of occupational accidents.

\* The Days Away, Restrictions and Transfers (DART) rate is calculated as N/EH x 200,000. (N = total days away from work. EH = total annual hours worked by all employees. The 200,000 hours in the formula represents the equivalent of 100 employees working 40 hours per week for 50 weeks per year.)

## Workdays Lost Due to Occupational Accidents (Fiscal Year 2013–Fiscal Year 2015)

	DIC			DIC Group (Japan)			DIC Group (Global)		
	FY2013	FY2014	FY2015	FY2013	FY2014	FY2015	FY2013	FY2014	FY2015
Number of workdays lost	2	0	1	6	4	5	84	80	88
Frequency rate	0.338	0.000	0.181	0.622	0.429	0.556	-	2.133	2.375
Severity rate	0.001	0.000	0.005	0.018	0.006	0.018	-	-	-
DART rate	3.5	0.1	1.3	16.0	9.6	6.2	17.8	20.3	21.8

### Frequency Rate

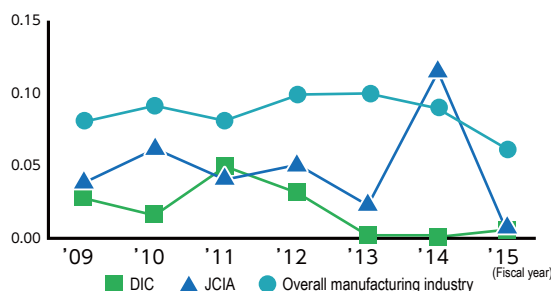


Frequency rate: This expresses the frequency of accidents resulting in lost time in a fiscal year, calculated as the number of deaths or injuries per million work hours.

$$\text{Frequency rate} = \frac{\text{Number of occupational deaths or injuries}}{\text{Total work hours}} \times 1,000,000$$

A frequency rate of 1.0 means one occupational accident resulting in workdays lost in one year at a site with 500 people.

### Severity Rate



Severity rate: This expresses the number of workdays lost due to occupational accidents per 1,000 work hours.

$$\text{Severity rate} = \frac{\text{Total number of workdays lost}}{\text{Total work hours}} \times 1,000$$

A severity rate of 0.1 means 100 workdays lost in one year at a site with 500 people.

## Safe Corporate Climate Cultivation Working Group

The Safe Corporate Climate Cultivation Working Group comprises personnel in charge of safety at plants belonging to DIC and subsidiary DIC Graphics. The group has been active since fiscal year 2011. Members meet regularly to discuss and exchange proposals regarding safety policies and measures. In fiscal year 2012, the working group presented recommendations on safety policies and produced warning stickers to enhance awareness of workplace hazards. In fiscal year 2013, the group prepared safety posters and initiated the reading out of key passages from *Principles of Safe Conduct* in workplaces. In fiscal year 2014, the group produced an illustrated version of *Principles of Safe Conduct*.

In fiscal year 2015, the group edited the booklet into a block calendar version for distribution at all workplaces to further strengthen the DIC Group's culture of safety. These materials are being translated into English and Chinese for use Groupwide.



Pages from the illustrated version of *Principles of Safe Conduct* for workplace reading circles



Komaki Plant employees reading out key passages

## Occupational Health

The DIC Group handles a broad range of chemicals, including specified chemical substances and organic solvents. To safeguard the health of employees handling these chemicals, the Group regularly conducts health checkups and environmental measurements, and modifies and improves working conditions as needed. Industrial physicians, health supervisors and other experts inspect workplaces to manage employee health.



## Electronic Storage of Employee Work and Health Records

Japanese laws and regulations mandate that companies handling specified chemical substances with the potential to cause serious health problems as a result of long-term exposure must maintain appropriate working environments as well as store work and health check records for 30 years. Companies must also maintain storage space for these records to minimize the risk of paper-based documents going astray or becoming lost.

In fiscal year 2014, the domestic DIC Group built a centralized data management system comprising an information network linking each work site, facilitating the electronic recording and storage of data for each employee and the review of information by supervisors and administrators. This approach ensures consistent recording formats at each site and helps eliminate the risk of records going astray while resolving the issue of storage space.

## Security and Disaster Prevention

### Basic Approach and Organization

Any fire, explosion or leak of hazardous substances from a chemical plant could have a tremendous impact on local residents and the rest of the community and damage the health of employees, including those of partner companies. In addition to establishing a security management system to prevent such accidents, the DIC Group operates and maintains its facilities in line with pertinent laws and regulations. The Group regularly conducts emergency drills and has earthquake and other response measures in place.

DIC also undertakes risk assessments to ensure its ability to construct safe production facilities. In 2013, the Group formulated the DIC Process Risk Management (PRM) Guidelines\*, which consist of four assessment techniques and implementation timetables for each. The Group uses these tools to conduct regular risk assessments at each of its sites.

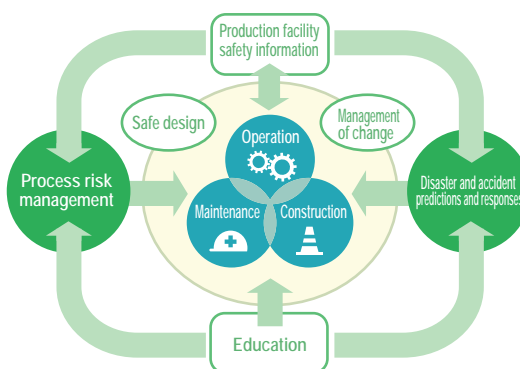
\* The DIC PRM Guidelines outline timetables and implementation frameworks for assessing the handling of chemical substances, production processes, production formulas, machinery and work practices with the aim of comprehensively identifying and steadily reducing risks associated with production and R&D processes.

### Facility Safety Assessment

#### 1 Assessment Procedures

DIC Group production facilities have an array of equipment, ranging from units where chemical reactions are conducted to machine presses and other processing equipment. When modifying processes or upgrading/replacing equipment, the Group assesses safety at every stage, from process design and construction through to operation, maintenance and final disposal, in line with risk assessment guidelines for reaction processes and for equipment and facilities, to ensure higher safety levels for new processes and facilities. In fiscal year 2015, DIC revised risk assessment guidelines for machinery and equipment to encourage understanding and prepared educational materials to prevent static electricity accidents.

#### Conceptual Illustration of DIC's Safety Infrastructure



#### 2 Accident and Disaster Analysis and Timely Information

DIC collects and compiles information on internal and external accidents, disasters and problems into its Occupational Accident Case Studies and Accident Case Studies databases. After identifying the causes of accidents or problems and establishing points to be checked, the Company incorporates database information into safety education for DIC and DIC Group companies in Japan and overseas.

#### 3 Initiatives to Enhance Safety Competency

A company's safety competency can be defined as its ability to maintain safety levels at its various sites. DIC's safety assessment system encompasses questions about safety infrastructure (technical considerations) and the Company's culture of safety (operation and management of organizational culture). DIC introduced this system in fiscal year 2013 as a means of objectively evaluating and enhancing its safety capabilities. This system was developed by the Japan Society for Safety Engineering (JSSE) and engineers in the petrochemicals industry as a common benchmark. The system is currently used by the 21 major corporations in Japan that jointly established the Safety Competency Enhancement Center.

To promote the greater use of safety assessment systems, in fiscal year 2015 the Safety Competency Enhancement Center formulated a system for evaluating processing sites and a prioritized version of the system to streamline evaluations. Because the DIC Group has processing sites in Japan, DIC participated in the assessment system for processing sites. Going forward, DIC plans to broaden the implementation of safety assessments beyond sites with reaction facilities to include processing sites.

## VOICE from the DIC Group

**We are drawing on DIC's expertise in improving safety competency to assist companies in other industries.**

As a supporting member of the Safety Competency Enhancement Center, DIC has participated in the establishment and promulgation of a safety assessment system. This focused initially on continuous process plants. In 2014, we set up a working group to create a safety assessment system for processing plants. I oversaw this working group, which completed an assessment system for processing sites. We thereby created a prioritized version of the assessment system and rolled out an evaluation setup for processing sites at the Safety Competency Enhancement Center, augmenting the existing system. In fiscal year 2015, we updated the basic assessment system to streamline it.

We have received requests for plant safety assessments from the steelmaking and other industries. Members of the Safety Competency Enhancement Center have begun undertaking such work. We hope to disseminate our safety assessment system among a wider range of industries to help reduce accidents.

Senior Manager, Responsible Care Department **Yasuaki Ohira**



### Emergency Response Drills

DIC augments daily security patrols and periodic equipment checks with regular emergency response drills, especially at production sites in Japan and overseas, to prepare for emergencies.



Comprehensive fire drill at Hokuriku Plant



Comprehensive fire drill at Saitama Plant

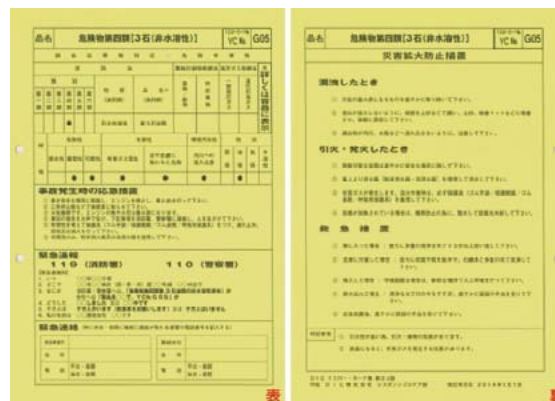
### Safety Management in Logistics

The DIC Group commissions logistics firms to transport its chemical products. In Japan, these firms use containers that comply with the Fire Service Act and other transportation laws, as well as with related United Nations' standards. The Group supplies information needed to display labels complying with GHS\*1 as well as provides SDSs and other documentation to ensure safe shipping in Japan and overseas.

DIC endeavors to maintain and enhance safety by requiring transport personnel to carry Yellow Cards\*2 to ensure proper responses in the event of an emergency and by meeting regularly with representatives from logistics firms to discuss safety and transportation quality.

\*1 GHS: Globally Harmonized System of Classification and Labelling of Chemicals

\*2 Yellow Cards are part of activities recommended by the Japan Chemical Industry Association (JCIA). The cards contain information about the right actions to take if an accident occurs. It provides contact details to ensure proper responses by transportation companies, firefighters and police officers if an accident occurs during the transport of chemical substances. Transport personnel must carry these cards at all times.



Yellow Card carried by transport personnel

# Preventing Global Warming

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Reduce emissions of CO <sub>2</sub> at sites (Scope 1 and 2).	<b>DIC Group</b> <ul style="list-style-type: none"> <li>Reduce energy consumption per unit of production 1.0% from the fiscal year 2014 level.</li> <li>Reduce CO<sub>2</sub> emissions 1.0% from the fiscal year 2014 level.</li> </ul>	<b>DIC Group</b> <ul style="list-style-type: none"> <li>Increased 1.0% from a year earlier (lowered by 1.1% in Japan)</li> <li>Unchanged (down 2.4% in Japan)</li> </ul>	★	<b>DIC Group</b> <ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> consumption per metric tonne of production by 1.0% from the fiscal year 2015 level.</li> <li>Reduce CO<sub>2</sub> emissions by 1.0% from the fiscal year 2015 level.</li> </ul>
				<b>DIC Group (Japan)</b> <ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> consumption per metric tonne of production by 1.0% from the fiscal year 2015 level.</li> <li>Reduce CO<sub>2</sub> emissions by 1.0% from the fiscal year 2015 level.</li> <li>Reduce energy consumption by 1.0% by conserving energy.</li> </ul>
Reduce emissions of CO <sub>2</sub> when transporting goods (Scope 3).	<b>DIC Group (Japan)</b> <ul style="list-style-type: none"> <li>Promote modal shift and improve transport efficiency with the aim of reducing energy consumed per unit of production.</li> <li>Reduce CO<sub>2</sub> emissions from logistics.</li> </ul>	<b>DIC Group (Japan)</b> <ul style="list-style-type: none"> <li>Unchanged</li> <li>Increased 3.0%</li> </ul>	★★★	<b>DIC Group (Japan)</b> <ul style="list-style-type: none"> <li>Promote modal shift and improve transport efficiency to reduce energy consumed per unit of production.</li> <li>Reduce CO<sub>2</sub> emissions from logistics.</li> </ul>

Note: From fiscal year 2015, we identified and incorporated energy consumption (1,203 kiloliters) and CO<sub>2</sub> emissions (2,695 metric tonnes) at 21 offices and research facilities in the DIC Group in Japan, whose weights were 1.1% of previous year consumption and CO<sub>2</sub> emissions. After calculating figures based on previous year conditions, energy consumption per unit of production thus increased 0.6% for the DIC Group overall and declined 2.2% for the DIC Group in Japan. CO<sub>2</sub> emissions were down 0.5% for the DIC Group overall and 3.4% for the DIC Group in Japan.

## Basic Approach

Climate change, a principal cause of which is global warming, is an increasingly pressing issue for the entire world. The Intergovernmental Panel on Climate Change (IPCC), a leading scientific body dedicated to the assessment of climate change, continues to urge its member countries to reinforce and expand the application of climate change countermeasures. With 16 of its 33 Group sites (and 21 offices and research facilities) in Japan accorded Designated Energy Management Factory status, DIC included initiatives aimed at reducing greenhouse gas emissions from its production facilities in its annual sustainability policy for fiscal year 2015. The Company is also currently implementing initiatives to reduce its consumption of energy, and thus its emissions of CO<sub>2</sub>, as well as promoting the active disclosure of related data.

- ① Undertake energy-saving initiatives Groupwide
- ② Deploy effective strategies through working group activities
- ③ Operate energy-saving cogeneration systems (combined heat and power generating facilities)
- ④ Employ energy from renewable resources (biomass, wind power and solar power) at suitable sites
- ⑤ Extend energy-saving initiatives to DIC Group companies overseas

## Framework for Promoting Energy-Saving Initiatives

DIC and DIC Group companies in Japan have established energy-saving promotion committees at each of their production and R&D sites. Committee activities include confirming the progress of initiatives, engaging in discussions and conducting patrols. DIC has also set up an energy-saving working group comprising members chosen from each production facility that fosters the exchange of information, research pertaining to new items and the Groupwide implementation of effective measures. This combination of site- and Group-level initiatives forms the framework under which the DIC Group works to reduce CO<sub>2</sub> emissions.

DIC Group companies overseas promote a wide range of independent energy-saving initiatives. The Production Management Department provides support on multiple fronts, including the deployment of management systems and the training of employees.

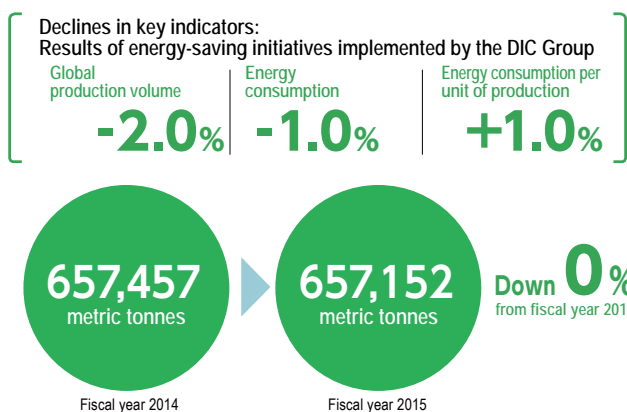
## Principal Initiatives in Fiscal Year 2015

### 1 Energy Consumption and CO<sub>2</sub> Emissions by the Global DIC Group

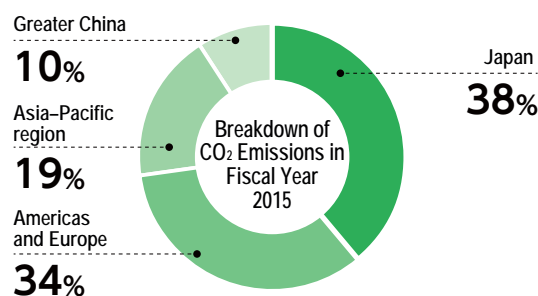
The DIC Group views energy consumption per metric tonne of production as an important measure of its energy efficiency. In line with a 2.0% decline in production volume from a year earlier, the Group reduced energy consumption in fiscal year 2015 by 1.0%, calculated in kiloliters of crude oil. This amounted to 285,557 kiloliters, from 288,452 kiloliters a year earlier. Energy consumption per unit of production rose 1.0%, to 149.89 liters/metric tonne, from 148.40 liters/metric tonne in fiscal year 2014. The changes reflected lower volumes for printing inks and polymers and higher production volumes for pigments and PPS products. Another factor was increased energy consumption not contributing to production, notably from the expansion of floor space in clean rooms to support quality improvement efforts. CO<sub>2</sub> emissions were 657,152 metric tonnes, down from 657,457 metric tonnes in fiscal year 2014.

The DIC Group will continue to roll out fuel conversion and high-efficiency equipment and revamp processes and improve capacity utilization. In fiscal year 2015, the Group began identifying and incorporating energy consumption and CO<sub>2</sub> emissions at 21 Group offices and research facilities in Japan. (Coverage was previously limited to the Central Research Laboratories and offices and research facilities within plant sites, which accounted for 1.1% of domestic energy consumption and CO<sub>2</sub> emissions in fiscal year 2014.) Calculated on the same basis as in fiscal year 2014, energy consumption per unit of production by the DIC Group in Japan in fiscal year 2015 was up 0.6% from the previous period, while CO<sub>2</sub> emissions, at 654,457 metric tonnes, were down 0.5%.

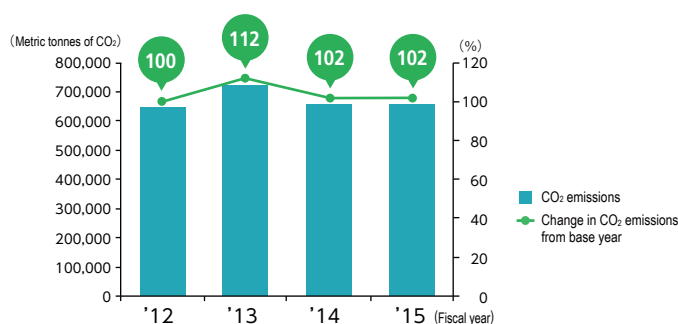
#### Global CO<sub>2</sub> Emissions in Fiscal Year 2015



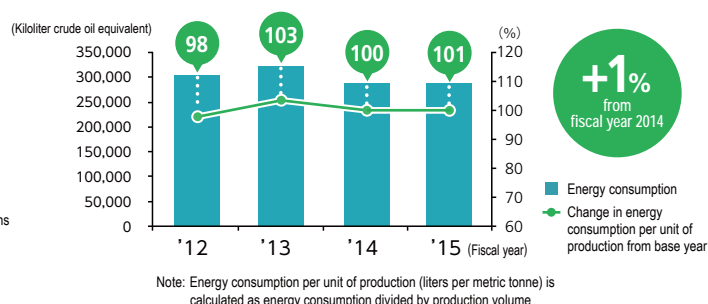
#### CO<sub>2</sub> Emissions in Fiscal Year 2015 by Region



#### Global CO<sub>2</sub> Emissions and Change from Base Year (Fiscal Year 2011)



#### Global Energy Consumption and Change in Energy Consumption per Unit of Production from Base Year (Fiscal Year 2011)



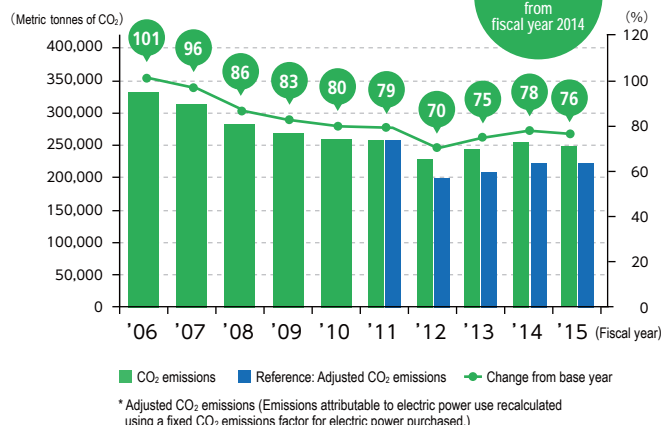
### 2 Energy Consumption and CO<sub>2</sub> Emissions by the DIC Group in Japan

The DIC Group in Japan—which encompasses DIC and the 54 business sites of its domestic Group companies—reported a 1.5% decrease in production volume and a 2.6% decline in energy consumption. This was equivalent to 108,962 kiloliters of crude oil, and reflected extensive energy-saving efforts. The Group thus reached all of its targets for the year, as energy consumption per unit of production improved 1.1%, while CO<sub>2</sub> emissions were down 2.4%.

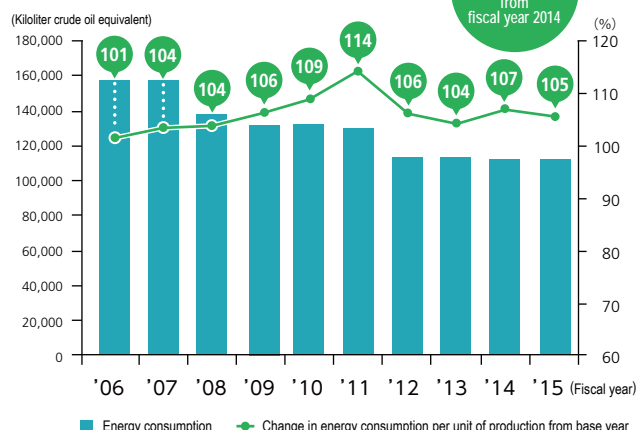
In fiscal year 2015, the Group began identifying and incorporating energy consumption and CO<sub>2</sub> emissions at 21 Group offices and research facilities in Japan. (Coverage was previously limited to the Central Research Laboratories and offices and research facilities within plant sites, which accounted for 1.1% of domestic energy consumption and CO<sub>2</sub> emissions in fiscal year 2014.) Calculated on the same basis as in fiscal year 2014, energy consumption per unit of production by the DIC Group was down 2.2% from the previous period, while CO<sub>2</sub> emissions per unit of production declined 3.4%.

DIC Group in Japan

CO<sub>2</sub> Emissions and Change from Base Year (Fiscal Year 2005)



Energy Consumption and Change in Energy Consumption Per Unit of Production from Base Year (Fiscal Year 2005)



Factors Contributing to Increase in CO<sub>2</sub> Emissions by the DIC Group in Japan in Fiscal Year 2015

Factor	Impact on CO <sub>2</sub> emissions (metric tonnes)	Change in weight*	Notes
Impact of energy-saving initiatives	-5,592	-2.2%	The implementation of 493 energy-saving initiatives accounted for a 2,506-kiloliter reduction in energy consumption.
Reduction of production volume	-3,738	-1.5%	Production volume at DIC and domestic affiliates dropped 0.9% and 2.8%, respectively, from the previous year.
Change in CO <sub>2</sub> emissions factor for electric power purchased	-3,292	-1.3%	The national average of CO <sub>2</sub> emissions from purchased electric power increased around 2% from the previous year. In particular, there was a 5% improvement in emissions at Tokyo Electric Power Co., Inc., which was the source of 56% of the energy that the domestic DIC Group consumed.
Reduced operation of biomass boilers and others	7,323	2.9%	Increased maintenance of biomass boilers boosted the use of backup boilers that used fossil fuels.
Additional inclusion of energy consumption at 21 offices and research facilities	2,689	1.1%	Previously identified and incorporated Central Research Laboratories and offices and research facilities within plant sites, and newly added 21 sites.
CO <sub>2</sub> emissions from non-energy sources	1,615	0.6%	Increased boiler combustion volumes from oil byproducts of production processes.
Boundary changes	-3,100	-1.2%	Excluded from scope (11,000 metric tonnes of CO <sub>2</sub> ) → Fuji Label Co., Ltd. and DIC Filtec, Inc. Included in scope (7,900 metric tonnes of CO <sub>2</sub> ) → KJ Chemicals Corporation
Others	-1,958	-0.8%	Reduction factor → Change in composition of production items and others Increase factor → Increase in energy consumption that did not contribute to production, notably extended clean room floor space
<b>Total</b>	<b>-6,053</b>	<b>-2.4%</b>	

\* Increase or decrease in percentage of total CO<sub>2</sub> emissions from fiscal year 2014

3 Energy-Saving Initiatives in Japan in Fiscal Year 2015

All plants and R&D sites endeavor to conserve energy through the following initiatives to reduce base load energy consumption and by applying the PDCA cycle to improve the efficiency of production methods, thereby reducing energy used, as well as to shorten process times.

- Employ highly efficient lighting and air conditioning and measures to cut waste
- Introduce energy-saving controls on pumps and blowers
- Use more efficient compressors and implement measures to reduce pressure losses
- Promote measures to improve the power factors of electric equipment
- Adopt high coefficient of performance (COP) chillers and measures to prevent cold and hot water supply waste
- Reduce boiler fuel through the recovery of waste heat
- Ensure appropriate warming times and temperatures for raw materials

493 energy-saving initiatives accounted for a reduction in energy consumption equivalent to 12,530 200-liter drums of crude oil



In fiscal year 2015, these initiatives reduced energy consumption by 2,506 kiloliters (crude oil equivalent, with an associated reduction in CO<sub>2</sub> emissions of 5,592 metric tonnes), equivalent to 12,530 200-liter drums of crude oil, or 2.2% of total energy consumption by the DIC Group in Japan in the period.

While continuing to promote energy-saving measures, the Group will focus on sharing excellent practices among sites. The Group will also reinforce management manuals for key energy-consuming equipment, including boilers, chillers and compressors, to optimize performances, and step up initiatives both in Japan and overseas.

The DIC Group in Japan implemented the following key energy-saving initiatives in Japan in fiscal year 2015.

No	Plant	Energy-saving initiative	Impact in fiscal year 2015	
			Reduction in annual energy consumption (kiloliters)	Reduction in CO <sub>2</sub> emissions (metric tonnes)
1	Yokkaichi Plant (DIC)	Reduced LNG consumption by improving usage of reactionary heating medium	158	303
2	Utsunomiya Plant (DIC Graphics)	Shortened operating times of cooling water pumps and air conditioners	152	275
3	Chiba Plant (DIC)	Reduced steam by reinforcing heat-retention management of product tanks	151	903
4	Komaki Plant (DIC)	Reduced steam losses by repairing steam pipework	126	252
5	Gunma Plant (DIC Graphics)	Changed electric heating temperature settings and shut equipment off when not in use	109	220
6	Chiba Plant (DIC)	Conserved energy by upgrading P8 boiler and P12 chiller	99	200
7	Hokkaido Plant (DIC Kitanihon Polymer Co., Ltd.)	Reduced boiler fuel usage by reducing usage of ash water	84	196
8	Iwai Plant (DIC, Seiko PMC Corporation)	Used turpentine oil effectively as boiler fuel	65	124
9	Tatebayashi Plant (DIC)	Optimized cooling water pumps and adjusted equipment operation	61	120
10	Sakai Plant (DIC)	Upgraded air conditioning systems on the second and third floors of the No. 1 building (GHP → EHP)	37	70
11	Hokuriku Plant (DIC)	Reduced operating times for nitrogen generation devices by 95%	31	77
12	Yatsushiro Plant (KJ Chemicals Corporation)	Installed electric water heaters for baths	30	70
13	Saitama Plant (DIC)	Recovered steam from waste heat boiler	30	11
14	Harima Plant (DIC, Seiko PMC)	Upgraded spot coolers	26	53
15	Kansai Plant (DIC Graphics)	Reduced rolling mill power consumption by employing roll-free facilities	20	40
16	Kashima Plant (DIC)	Power reduction by changing technique used to remove suspended solids	19	40
17	Sodegaura Plant (DIC EP Corp.)	Reduced electricity use by production plant lines	13	27
Subtotal (17 initiatives)			1,211	2,981
Others (476 initiatives)			1,295	2,611
Total (493 initiatives)			2,506	5,592

### Improving Yields by Expanding Use of System to Enhance the Visibility of Energy Consumption

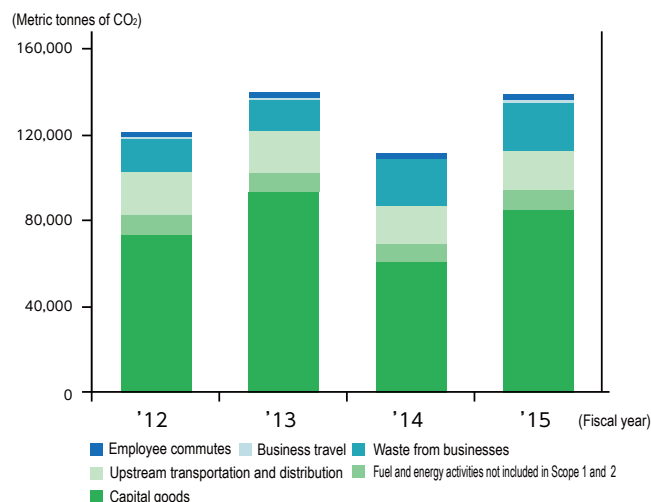
With the aim of optimizing the use of electric power on an individual facility basis, DIC developed a system that measures, monitors and verifies waste and irregularities in use, thereby enhancing the visibility of energy consumption. Initially installed at the Hokuriku Plant in 2012, the system—which won the ECCJ Chairman's Prize at Japan's 2012 Energy Conservation Grand Prize awards, sponsored by the Energy Conservation Center, Japan (ECCJ)—has since been rolled out at DIC sites across Japan. In fiscal year 2014, the system was installed at the Komaki Plant. A system to enhance visibility, which also analyzes energy consumption during different production processes, was installed on the V, C and B production floors of the Chiba, Kashima and Sakai plants, respectively, to reproduce optimum yields for materials inputs. In 2016, DIC looks to install more advanced versions of the system at the Yokkaichi Plant.

One outcome of efforts to enhance the visibility of energy consumption was an increase in the number of categories of Scope 3\*, in which DIC reports indirect emissions of CO<sub>2</sub>, from one ("upstream transportation and distribution") in fiscal year 2012 to six (including "capital goods" and "waste from businesses") in fiscal year 2013.

\* Scope 3 is the Greenhouse Gas Protocol's standard for calculating indirect greenhouse gas emissions resulting from production, transport, business travel and commuting, among others, across entire supply chains.



### CO<sub>2</sub> Emission Changes in Supply Chain



### Reducing Energy Consumption and Increasing Product Quality through Kaizen Skill Improvement Training

Having recognized that enhancing the awareness of employees in production and providing them with the tools to continuously improve their work are crucial to strengthening front-line capabilities, in 2008 DIC began offering the Kaizen Skill Improvement Training program. This program—which is structured around four themes, namely, reducing energy consumption, increasing yields, enhancing product quality and rationalizing operation—seeks to foster professionals who can identify and resolve issues on their own initiative. Participants spend one year participating in initiatives aimed at improving quality control methods and the following year putting their findings into practice. Each December, achievements are presented at a briefing attended by pertinent plant general managers and directors.

Since 2012, DIC has also provided training for employees who have completed the Kaizen Skill Improvement Training program to equip them with the leadership and educational skills necessary to serve as instructors for the program. As of the end of fiscal year 2015, a cumulative total of 328 employees from DIC sites in Japan had completed the program, with approximately 10% subsequently going on to earn accreditation as program instructors, adding momentum to energy-saving and other initiatives.



Kaizen Skill Improvement Training

## 4 Increasing Independent Electric Power Generation through Cogeneration and the Use of Renewable Energy

### Increasing Cogeneration System-Based Independent Electric Power Generation

With the aim of increasing energy efficiency, and as a precaution against natural disasters, the DIC Group in Japan is promoting the systematic adoption of cogeneration and the use of renewable energy, that is, energy from sources that are naturally replenished. Cogeneration systems burn fuel to drive turbines, facilitating the production of electric power and the recovery and reuse of waste heat (steam and hot water), thereby improving energy efficiency.

With cogeneration systems already in operation at five domestic plants (Chiba, Shiga, Saitama, Gunma and Tokyo), in autumn 2015 DIC installed a natural gas turbine-powered cogeneration system with a capacity of 1,700 kWh at its Kashima Plant. As of December 2015, the total combined maximum generating capacity of the Group's cogeneration systems in Japan was 21,000 kW. Electric power produced through cogeneration in fiscal year 2015 amounted to 38,840,000 kWh, equivalent to 14.4% of the electric power consumed by the DIC Group in Japan during the period.

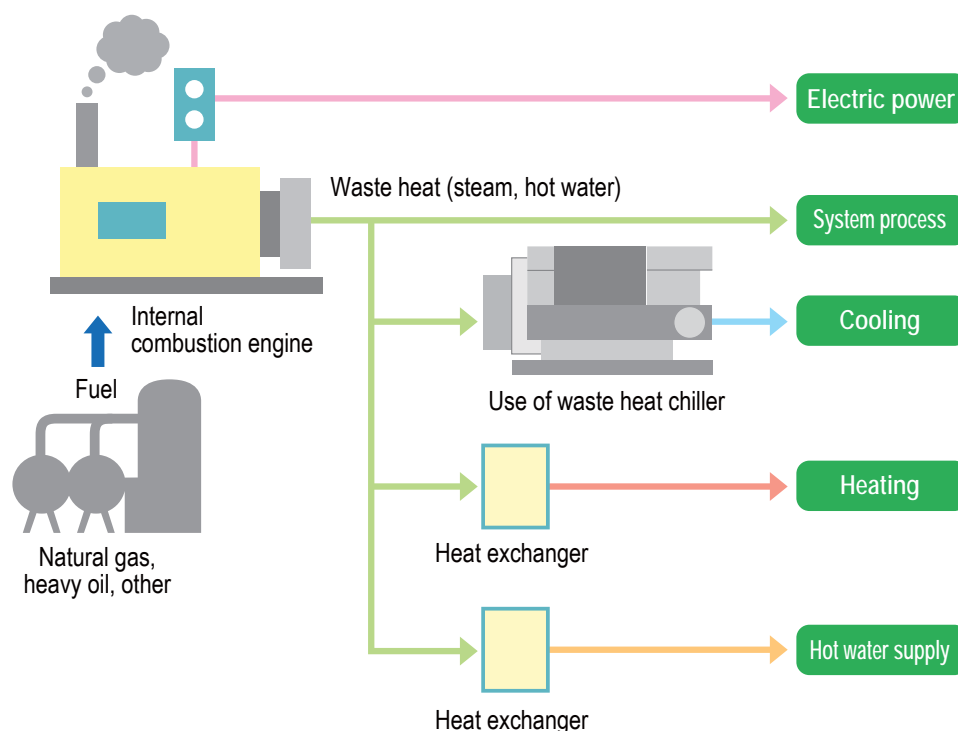
DIC plans to update the cogeneration system at its Chiba Plant, which currently has a capacity of 6,000 kWh, in late 2016. This is expected to increase the system's generating capacity by 3,800 kWh.



Natural gas turbine-powered cogeneration system at the Kashima Plant



### Conceptual Diagram of Cogeneration System



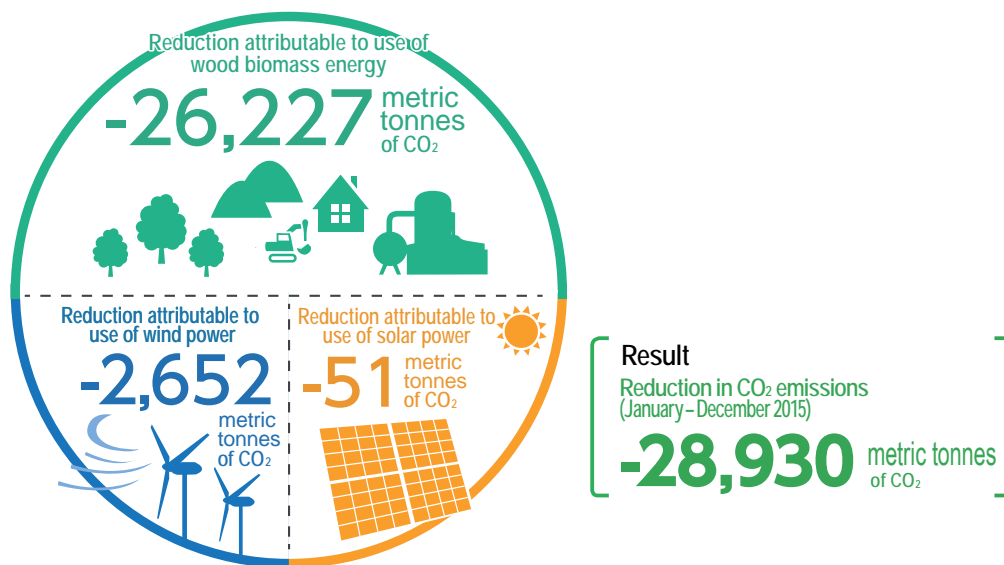
## Using Renewable Energy

In Japan, the DIC Group actively promotes the use of energy from renewable sources at suitable sites. The biomass boiler at the Kashima Plant (generating capacity: 4,000 kW and 30 tons of steam per hour) contributes significantly to this effort. DIC focuses on improving the quality of wood chips used as boiler fuel, which influences operating rates, as well as on enhancing maintenance procedures. By combining this boiler with two wind power facilities (each with a generating capacity of 2,300 kW) and a solar power generation facility (100 kW), DIC aims to achieve an optimal power mix of purchased electric power, cogeneration systems and renewable energy.

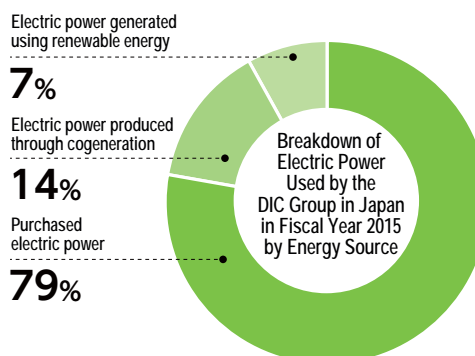
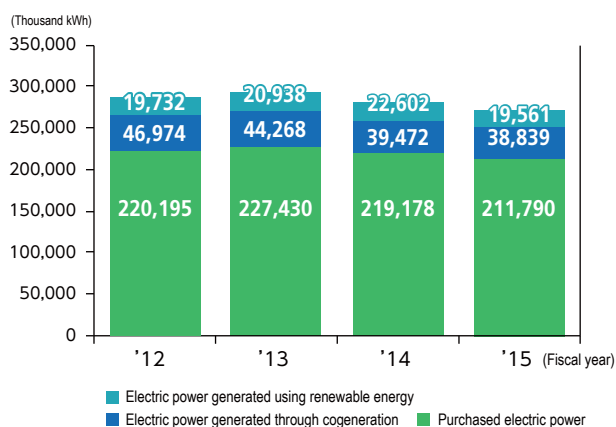
In fiscal year 2015, the biomass boiler's operating rates were reduced owing to maintenance. As a consequence, renewable energy usage volume declined 16.1% from a year earlier, to 12,524 kiloliters (11.5% of the DIC Group's energy consumption in Japan). The Group's CO<sub>2</sub> emissions in fiscal year 2015 thus dropped 28,930 metric tonnes.

Leveraging biomass boiler management technologies developed in operating facilities at the Kashima Plant, in December 2017 DIC plans to install boilers at the Hokuriku Plant in Ishikawa Prefecture.

### CO<sub>2</sub> Emission Reductions at Kashima Plant (January–December 2015)



### Electric Power Used by the DIC Group in Japan in Fiscal Year 2015 by Energy Source





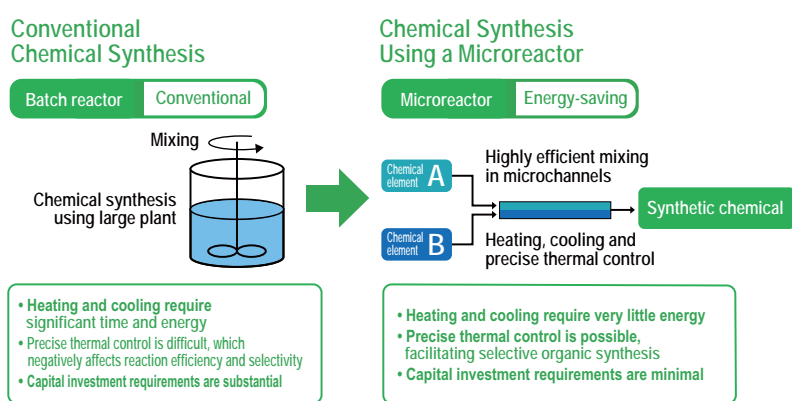
## Microreactors: Realizing Production Processes that Lower Environmental Impact

To date, the majority of synthetic chemicals have been produced in batch reactors, where two or more different chemical elements are combined, causing a chemical reaction, and byproducts and impurities are removed. Because heat exchange efficiency is low, heating and cooling require significant amounts of energy. Also, precise thermal control is difficult, as a result of which it is difficult to manage reaction efficiency and quality.

R&D aimed at addressing these challenges opened the way for microreactors, which employ a number of unique processes. With microreactors, the introduction of raw materials and the reaction and recovery of byproducts and impurities occurs in a continuous flow within microchannels that deliver superb heat exchange efficiency. In addition to a significant reduction in energy use, microreactors facilitate precise thermal control—thereby minimizing electric power consumption and greatly improving reaction efficiency and quality—and the reduction of waste. Microreactors also allow reactions and chemical synthesis processes that are unfeasible with batch tank reactors due to safety concerns, the benefits of which include shorter lead times for plant construction.

Having recognized the potential of microreactors early on, DIC has promoted extensive R&D aimed at developing a commercially viable unit. In September 2013, the Company's Hokuriku Plant deployed a microreactor for use in the production process for fluorinated surfactants, achieving a significant improvement in reaction efficiency that reduced production time to one-ninth the previous level, thereby reducing energy consumption and essentially eliminating the generation of waste during production.

Because it develops and produces a diverse range of chemical compounds, DIC prioritizes revolutionizing manufacturing processes to enhance the quality of its products and lower its impact on the environment. DIC will continue to realize production processes with low environmental impacts that contribute to its sustainability.



Microreactor at DIC's Hokuriku Plant

## Reconstruction of Global Corporate Headquarters

In May 2015, DIC completed a two-year reconstruction of its corporate headquarters, the DIC Building in Tokyo's Nihonbashi district, undertaken with the aim of centralizing headquarters functions and improving the building's environmental efficiency.

● Floor space: 19,590 square meters (12 floors above ground and four below)

● Number of employees: 1,230

Environmental efficiency: CASBEE\* Environmental Efficiency Assessment (Class S)

\* The Comprehensive Assessment System for Built Environment Efficiency (CASBEE) has five certification levels: Class S (excellent), Class A (very good), Class B+ (good), Class B- (slightly poor) and Class C (poor).

## Key Environmental Efficiencies

- CO<sub>2</sub> emissions from building operations at time of basic design: 43.3% (1,089 metric tonnes of CO<sub>2</sub> a year) lower than the baseline of Tokyo Metropolitan Government's Energy Efficiency Carte
- High-efficiency transformers and solar power generation facilities (50 kW) and storage batteries (100 Ah)
- Lighting: Highly efficient LED grid lighting, Ecolumi LED and automatic dimming control system
- Air conditioning: Natural ventilation and distributed control system through high-efficiency electric heat source, air-cooled heat pump air conditioner
- CO<sub>2</sub> control ventilation system used for underground car park
- Building energy management system used to conserve power
- Rain and groundwater used to irrigate rooftop greenery and supply all toilets in the building

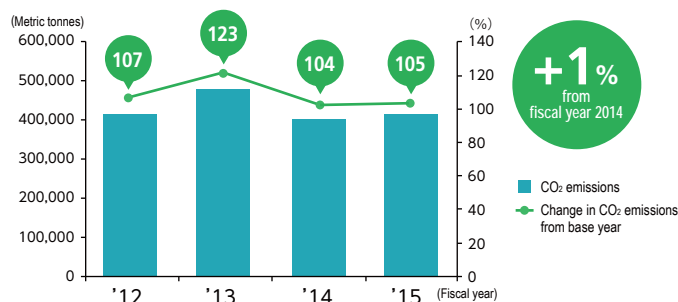
Energy consumption by DIC's corporate headquarters in fiscal year 2015 was equivalent to 479 kiloliters of crude oil, a decline of 2% from fiscal year 2014, despite a 23% increase in floor space.

In fiscal year 2015, the building maintenance company and DIC's Production Management Department and General Affairs and HR Department created an energy-saving promotion framework, encouraging employees to turn off lighting and air conditioning when not in use.

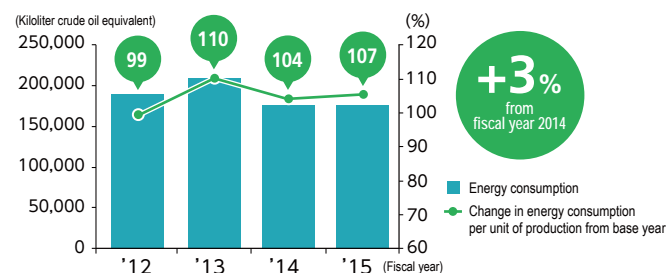
## 5 Energy Consumption and CO<sub>2</sub> Emissions by the DIC Group Overseas

Despite a 2.4% decrease in production volume, energy consumption by DIC Group companies overseas in fiscal year 2015 was level at 176,594 kiloliters of crude oil equivalent, while CO<sub>2</sub> emissions rose 1.4%, to 408,091 metric tonnes. The prime factors behind this were surging pigment production in Indonesia and higher energy consumption per unit of production at sites in India, the PRC (Hainan) and Taiwan (Taipei).

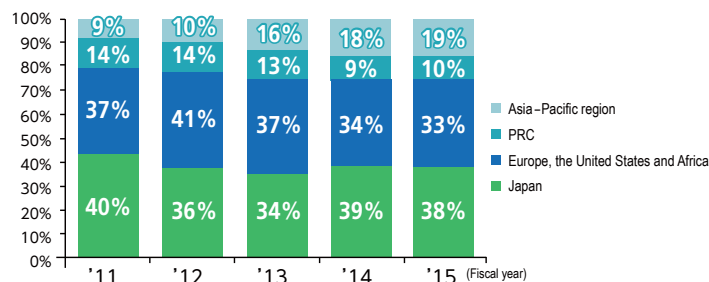
### CO<sub>2</sub> Emissions and Change from Base Year (Fiscal Year 2011)



### Energy Consumption per Unit of Production and Change in Energy Consumption from Base Year (Fiscal Year 2011)



### Proportional Changes in CO<sub>2</sub> Emissions by Region



## Energy-Saving Initiatives Overseas

Laws and regulations, as well as infrastructure, differ between countries and regions. The DIC Group strives to promote energy savings and efficient operations wherever it is active and in so doing sets precedents for the global chemicals industry.

Despite a 2.4% decline in production volume and the impacts of energy-saving initiatives based on MBO, the energy consumption of DIC Group companies overseas was unchanged. Energy consumption per unit of production increased 2.5%, while CO<sub>2</sub> emissions rose 1.4%, to 5,748 metric tonnes. In light of these results, in fiscal year 2016 DIC and DIC Group companies overseas will focus more on ways to prevent global warming through more extensive energy-saving activities, collaborating closely with DIC's Production Management Department.

### Results of Energy-Saving Initiatives Overseas in Fiscal Year 2015

Region	Number of initiatives	Reduction in energy consumption (kl)	Reduction in CO <sub>2</sub> emissions (metric tonnes of CO <sub>2</sub> )
Asia-Pacific region	47	327	760
Greater China	22	151	337
Americas and Europe	8	299	691
Total	77	777	1,788

**Asia-Pacific Region**

In the Asia-Pacific region, which accounts for 19% of the CO<sub>2</sub> emissions of the DIC Group, energy officers from 19 sites in 11 countries gather biennially for a conference on energy management issues and progress with energy-saving plans. (The conference itself is an annual event held in collaboration with DIC Group companies in the PRC, with the location alternating annually between the two regions.) The fiscal year 2015 conference was held in May 2015 in Jakarta, Indonesia, with 257 officers in attendance.

The objective of the conference is to keep tabs on the energy management and conservation efforts of each company to help enhance their capabilities. Recent gatherings have encompassed vigorous discussions about rollouts of measures based on the experiences of other Group companies.

Efforts have started recently in the region to check on energy management progress and the performance of energy-consuming equipment among Group companies. As part of these efforts, site employees known as energy-saving masters confirm energy-saving promotion frameworks, assess energy consumption, formulate policies and manage goals, and evaluate the performances of key equipment. They also create radar charts to clarify strengths and weaknesses and thereby encourage improvements.

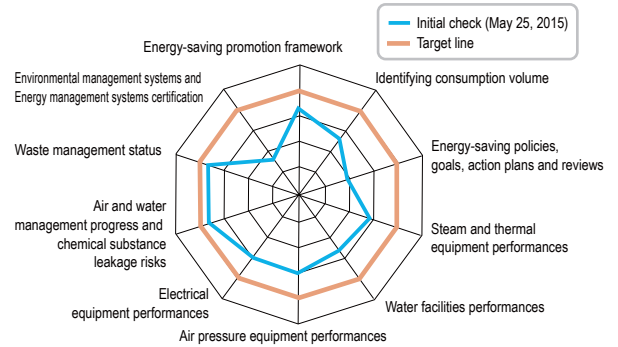


Asia-Pacific energy management conference in Jakarta, Indonesia



Energy-saving analysis activities (Malaysia)

**Activities Radar Chart**



**Installing Inverters to Reduce Power Consumption of Cooling Water Motor by 10% (DIC Epoxy (Malaysia) Sdn. Bhd.)**

High electric power consumption was an issue, as DIC Epoxy (Malaysia) uses powerful electric pumps to supply and circulate cooling water in manufacturing epoxy resin. The company's energy-saving project focused on the use of inverters as a way to match water supply to demand and consume less electricity without compromising the efficiency of cooling devices. Six inverters were installed, reducing electricity consumption around 10% by lowering motor frequency from 50 Hz to 45 Hz.



## TOPIC

### Energy Management Instruction by DIC Production Management Department

As a part of global environmental management efforts, specialists from the Production Management Department visit production sites in Greater China and the Asia–Pacific region every year to assess progress with management systems and follow up on improvements. In fiscal year 2015, these specialists visited nine production sites—two each in Indonesia and Singapore, one in Malaysia and four in the PRC. The prime goal was to reduce CO<sub>2</sub> emissions through the more efficient use of energy.

PT. DIC Graphics' pigments plant in Karawang, Indonesia, is a crucial facility that functions as the mother plant for phthalocyanine pigment (blue ink), which is used extensively in printing inks for food packaging, as well as in paints and plastics. The facility had found it challenging to improve energy efficiency, as pigment manufacturing processes use a significant amount of thermal energy (for heating media and dry boilers) and water (for washing).

As Indonesia faces difficulties in terms of its domestic natural gas supply infrastructure and prices, DIC has to use coal for fuel in its local operations. Specialists from the Production Management Department provided guidance about a method to reinforce process management by pulverizing coal uniformly to enhance combustion efficiency. They also offered suggested management techniques that clarify numbers in purification for activated sludge treatment using bacteria. Specialists provided detailed follow-up. This included suggesting upgrades to heat pump air conditioners that harness atmospheric heat such as those in use in Singapore and Malaysia and encouraging energy conservation by optimizing air compressor pressurization.



Energy management instruction at DIC Graphics' Karawang Plant

## VOICE from the DIC Group

### We are rediscovering the importance of inputs and outputs.

Since becoming part of the DIC Group in 2012, we have expanded plant production capacity while lowering environmental impact by deploying advanced technologies. Still, it is important to make data transparent and extensively manage inputs and outputs to ensure that pigment production is extremely energy efficient. We will continue pursuing higher goals by ensuring that all employees understand that saving energy lowers costs.



PT. DIC Graphics (Indonesia)  
 Manager **LT Gan**  
 Supervisor **Suhaimi Moin**

## PRC

In 2015, the government of the PRC enacted the revised Environmental Protection Law and Air Pollution Law to strengthen oversight over air, water, soil and noise. The government also required plants above certain scales to disclose environmental information. It was against this backdrop that specialists from the Production Management Department visited four sites in the south of the country to inspect environmental management systems and to follow up on issues. The sites were DIC Graphics (Guangzhou) Ltd., Shenzhen-DIC Co., Ltd., DIC Synthetic Resins (Zhongshan) Co., Ltd., and Zhongshan DIC Colour Co., Ltd.

Most production sites in Greater China are progressing well with PDCA cycles. That said, rapid production declines at some locations and heavy energy consumption to maintain and manage clean rooms at LC materials manufacturing sites drove higher energy consumption per unit of production. These issues are to be addressed from next fiscal year.



DIC Synthetic Resins (Zhongshan) Co., Ltd.



Zhongshan DIC Colour Co., Ltd.



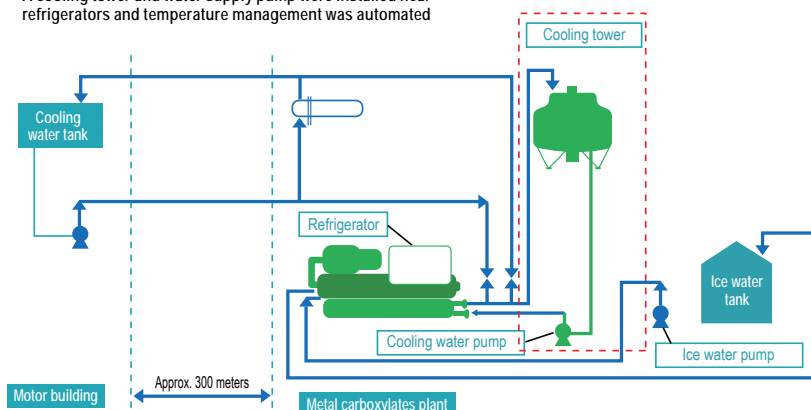
DIC Graphics (Guangzhou) Ltd.

## Slashing Refrigerator Power Consumption by Optimizing Equipment at DIC Synthetic Resins (Zhongshan)

Electricity bills account for high proportions of manufacturing costs, so conserving the power consumption of key facilities helps to greatly reduce expenses. At the company's metal carboxylates plant, refrigerators account for 30% of the plant's electricity consumption. The prime factors are cooling water supplied by remote motors and water supply pumps that operate at full capacity when refrigerators are running.

To ensure that everything performs efficiently, DIC Synthetic Resins (Zhongshan) Co., Ltd. kicked off a project in May 2015 to review processes and equipment and explore improvements. This resulted in the installation of a cooling tower and water pump near refrigerators to recirculate cooling water. The company also identified a way to link refrigerator compressors with ice water pumps, automatically turning them on when temperatures exceed 13°C and turning them off when refrigerating water drops to 9°C. Full-scale operations with the new setup, which is expected to slash annual power consumption to around 120,000 kWh, from 320,000 kWh at present, commenced in January 2016. DIC Synthetic Resins (Zhongshan) looks to recoup the facilities expansion construction costs within a year.

A cooling tower and water supply pump were installed near refrigerators and temperature management was automated



Upgraded cooling tower and water supply pump

## Harnessing Residual Heat from Incinerating Waste Liquid at Resin Varnish Factory at Nantong DIC Color

Nantong DIC Color Co., Ltd. incinerates waste resin varnish at the plant. The waste gas temperature from this process reaches between 700°C and 800°C. The plant installed a heat exchanger to use this heat for showers and hot water in pigment manufacturing processes. This move has cut the facility's annual electricity bill by around Rmb168,000. The plant is pushing ahead with an in-house suggestion system to solicit further energy-saving ideas from all employees.



New hot water tank (left) and heat exchanger (right) to recycle waste heat

## VOICE from the DIC Group

### Local executives play a key role in ensuring the efficient promotion of improvements.

Providing guidance in Greater China and the Asia-Pacific region involved not only energy managers but also local executives who are vital for decision making on capital expenditure and those overseeing machinery. This was crucial because despite rigorous efforts to switch off machinery when not in use, facilities continued to incur huge costs because they kept using older machinery. Although upgrades are expensive, we sought understanding by using case studies to highlight ways in which energy-saving efforts elsewhere have led directly to cost savings.

Simply increasing the visibility of energy consumption by installing a meter made it much easier to encourage energy and cost reductions. In that there are many small ways to enhance efficiency at production sites, we intend to continue identifying more improvements by providing energy-saving analyses while enhancing the skillsets of key local executives.

Manager in charge of efficiency, Production Management Department **Kazuo Kawaguchi**

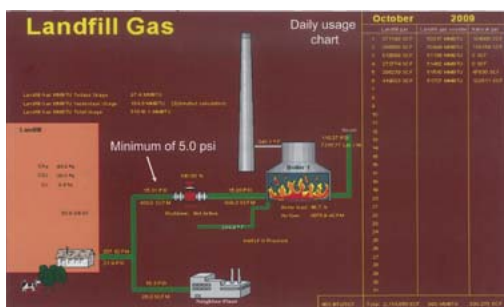


## Americas and Europe

In October 2013, the Sun Chemical Group—which has operations in 13 countries in North, Central and South America and 43 countries in Europe—rolled out a new internal Web-based data collecting system called EcoTrack, which facilitates the collection and centralized monitoring of data for key sustainability metrics related to energy, water, waste and safety at 153 sites. In addition to increasing the transparency of site data related to production, energy-saving initiatives and CO<sub>2</sub> emissions, among others, EcoTrack was designed to encourage the sharing of information and the horizontal deployment of measures.

The full implementation of the system across the Sun Chemical Group in fiscal year 2014 greatly increased the transparency of crucial data, which in turn accelerated the cycle of analyzing data, formulating responses and deploying measures, significantly increasing the progress of energy-saving initiatives. Of particular note, the mounting of sensors on production equipment and analysis of resulting data facilitated the calculation of optimum electric power and operating times for individual processes.

In Europe, the Sun Chemical Group continued to actively promote the use of renewable energy. In fiscal year 2015, Sun Chemical Group facilities in Europe used 900,000 kWh of renewable energy, 78% of which was accounted for by wind power and 22% by solar power, which supported the reduction of energy consumption and CO<sub>2</sub> emissions.



Sun Chemical production facilities are promoting energy management by, among others, expanding use of landfill gas (biogas) (United States)

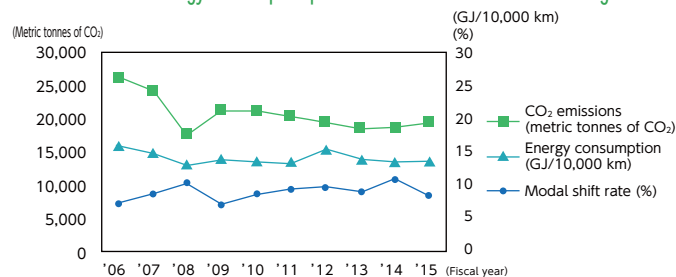


Logo for Sun Chemical initiative aimed at optimizing energy and production processes (United States and Europe)

## 6 Reducing Greenhouse Gas Emissions Attributable to Logistics

In fiscal year 2015, the DIC Group continued to examine its upstream distribution bases to identify those with low efficiency levels and implemented measures aimed at improving transport options for relatively short distances. Despite these efforts, energy consumption in logistics edged up 0.3% and associated CO<sub>2</sub> emissions rose 3.0% against a 1.9% increase in transport volume. The principal factor behind these increases is the revision of the reporting boundary for Scope 3 emissions attributable to the transport and shipping of products. DIC also reported an 18.8% decline in the volume of products shipped using modes of transport qualifying as “modal shift.” The volume of products shipped by container ship and rail decreased 17.9% and 19.6%, respectively. Factors behind these declines included elimination of key sea routes previously used by the Company and a decrease in the number of rail containers in certain areas. The DIC Group’s modal shift rate in fiscal year 2015 was 8.5%, down from 10.7% in the preceding period.

CO<sub>2</sub> Emissions and Energy Consumption per Unit of Production Attributable to Logistics



## 7 Initiatives in Areas Other than Production

In fiscal year 2015, DIC once again promoted efforts in line with Japan’s Cool Biz and Warm Biz campaigns, official efforts to reduce electric power consumption by limiting the use of air conditioning in summer and winter through measures such as the introduction of more relaxed office dress codes. The Company also continued to promote efforts aimed at reinforcing employees’ awareness of the importance of lowering energy consumption, including replacing superannuated light fixtures and air conditioning equipment in offices and sites with newer, high-efficiency models that satisfy standards set by the ECCJ for its Top Runner program, turning off lights when not needed and implementing mandatory 22°C winter and 28°C summer air conditioning settings.

## 8 Reporting to the CDP

The CDP (formerly the Carbon Disclosure Project) is a global nonprofit organization (NPO) that works on behalf of institutional investors to motivate companies to disclose information on initiatives to combat climate change and key environmental data. The CDP analyzes and evaluates information reported by approximately 6,000 companies worldwide, including 500 in Japan, and communicates its findings to said institutional investors. DIC has been reporting to the CDP since 2010. The CDP has recognized the Company’s consistent environmental initiatives and in fiscal year 2015 awarded it an overall score of 98A- (98 points for disclosure and a performance class of A-), significantly exceeding the average for companies based in Japan, which was 86C.

## VOICE from the DIC Group

We are promoting energy conservation with the aim of achieving a balance between corporate growth and sustainability.

The adoption of the Paris Agreement at COP21 in December 2012 was a historical milestone. Under the agreement, emerging economies are also required to implement measures to combat global warming. As a consequence, we have seen a tightening of regulations governing greenhouse gas emissions in many countries and regions. Our new medium-term management plan, DIC108, positions “low carbonization” as a crucial theme to respond to social imperatives going forward. We will continue to implement initiatives aimed at ensuring that employees of the global DIC Group recognize the importance of energy conservation to our ability to achieve a balance between corporate growth and sustainability and at motivating them to achieve the targets that have been set.

General Manager, Production Management Department **Michio Uchiyama**



### Looking Ahead

With the goal of deepening understanding of the importance of energy efficiency across the Group, DIC has inaugurated a number of important new initiatives. In Japan, for example, the Company has created a forum for DIC Group energy officers at principal production facilities to meet regularly and established four key themes to guide the efforts of working groups: promote energy conservation (maintain or improve wastewater treatment facilities); advance joint purchasing of energy on a regional basis (capitalize on the liberalization of electric power and gas industries); enhance electrical technologies to eliminate problems arising from electrical issues; and improve the performance of power systems. Through efforts implemented in line with these themes, the Group will probe deeper into issues of concern to society and foster experts in key areas to further reinforce responsiveness Groupwide.

On another front, DIC will continue to promote awareness among the management of overseas Group companies, including by conducting seminars on the importance of addressing critical-related ESG issues. By stepping up such efforts, DIC aims to enhance the Group’s environmental performance both in Japan and overseas.

# Reducing Emissions of Chemicals into the Environment

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Control emissions of chemical substances (Reduce emissions of 462 PRTR*1-designated substances and 89 chemical substances and one substance group targeted by JCIA*2 for voluntary control).	DIC Group (Japan): Total emissions of 392 metric tonnes (+8% from fiscal year 2014)	DIC Group (Japan): Total emissions of 394 metric tonnes (+8% from fiscal year 2014)	★★	PRTR-designated substances: Establish reduction targets for individual domestic sites and promote related initiatives (cumulative total of targets for domestic production facilities: 388 metric tonnes (-1.6% from fiscal year 2015)).

\*1 The PRTR is a scheme for assessing, aggregating and disseminating data on the sources of hazardous chemicals, amounts released into the environment and amounts transferred off-site from industrial establishments via waste products.

\*2 The JCIA is a general incorporated association. As one of Japan's major industry organizations, JCIA is a member of the International Council of Chemical Associations (ICCA) and pursues the healthy development of the chemical industry with other chemicals industry organizations around the world.

## Basic Approach

As chemicals companies handle a considerably greater volume and more diverse range of chemical substances than companies in other industries, they must be extremely vigilant to prevent discharges of such substances into the environment. DIC and DIC Group companies in Japan have worked to reduce emissions into the air, water and soil of substances designated under the Pollutant Release and Transfer Register (PRTR) since fiscal year 2000 and of substances targeted under a voluntary scheme created by the Japan Chemical Industry Association (JCIA) since fiscal year 2005. In fiscal year 2013, DIC introduced MBO at DIC Group companies in Greater China and the Asia-Pacific region with the aim of further encouraging emissions reductions.

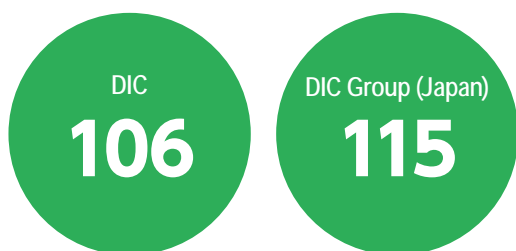
## Principal Initiatives in Fiscal Year 2015

In fiscal year 2015, the DIC Group's principal initiatives focused on 462 class-1 chemical substances designated by the PRTR and 89 chemical substances\* (excluding class-1 substances) and one substance group—chain hydrocarbons with 4 to 8 carbons—targeted for study by the JCIA. During the period, DIC and DIC Group companies in Japan used and/or produced 106 and 115 of these substances, respectively, in amounts exceeding 1.0 metric tonne. Both DIC and DIC Group companies in Japan sought to meet their emissions reduction targets for PRTR-designated substances by reviewing cleaning processes for reaction tanks and local exhaust ventilation devices. However, solvent recovery equipment at three sites malfunctioned, resulting in a decrease in the equipment's hours of operation, as a consequence of which DIC reported a 10% increase and DIC Group companies reported an 8% increase in emissions of these substances.

Overseas, DIC Group companies tracked emissions of targeted substances and reported findings to regulators in line with pertinent national and regional regulations. In fiscal year 2013, DIC Group companies in Greater China and the Asia-Pacific region introduced MBO using pertinent national targets and guidelines, thereby reinforcing their commitment to such efforts. The Group will continue working to attain both facility- and operations-related reductions targets.

\* In 2014, the JCIA reviewed chemical substances designated under the PRTR, as a result of which the number of targeted substances, previously 105, was revised to 89.

### Number of Targeted Chemical Substances Used and/or Produced in Amounts Exceeding 1.0 Metric Tonne in Fiscal Year 2015



### Environmental Emissions of Targeted Chemical Substances (551 Substances, Including those Designated by the PRTR, and One Substance Group) in Fiscal Year 2015

DIC	Emissions into the air	208 metric tonnes
	Emissions into water	11 metric tonnes
	Emissions into soil	0 metric tonnes
DIC Group (Japan)	Emissions into the air	382 metric tonnes
	Emissions into water	12 metric tonnes
	Emissions into soil	0 metric tonnes



Emissions of Targeted Chemical Substances(551 Substances and One Substance Group)  
in Fiscal Year 2015

Substance	DIC	DIC Group (Japan)
	Emissions into the environment	Emissions into the environment
Ethyl acetate	<b>64</b> metric tonnes	<b>107</b> metric tonnes
Toluene	<b>53</b> metric tonnes	<b>62</b> metric tonnes
Methyl ethyl ketone	<b>34</b> metric tonnes	<b>59</b> metric tonnes
Styrene	<b>5</b> metric tonnes	<b>39</b> metric tonnes
Acetone	<b>12</b> metric tonnes	<b>23</b> metric tonnes
Propyl alcohol	<b>4</b> metric tonnes	<b>21</b> metric tonnes
Butyl acetate	<b>0</b> metric tonnes	<b>12</b> metric tonnes

# Reducing Environmental Impact on Air, Water and Soil

## Goals and Achievements of Major Initiatives

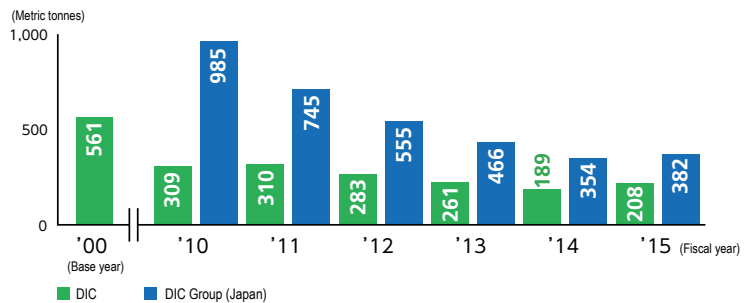
Evaluations are based on self-evaluations of current progress. Key: ★★★★★ = Excellent; ★★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Reduce VOC emissions into the air.	DIC Group (Japan): Total emissions of 380 metric tonnes (+8.0% from fiscal year 2014)	DIC Group (Japan): Total emissions of 382 metric tonnes (-22.0% from fiscal year 2014)	★★	<ul style="list-style-type: none"> <li>Reduce VOC emissions into the air.</li> <li>Establish reduction targets for individual domestic sites and promote related initiatives (cumulative total of targets for domestic production facilities: 379 metric tonnes (-1.6% from fiscal year 2015)).</li> </ul>

### 1 Addressing VOC Regulations

Having succeeded in achieving a voluntary target—set in fiscal year 2007—for reducing emissions of VOCs into the air of 30% by fiscal year 2010 (using fiscal year 2000 as the base year) for the DIC Group in Japan, domestic Group companies continue to pursue steady annual reductions through facility improvements and emissions management. In fiscal year 2015, DIC emissions of VOCs into the air generated by DIC amounted to 208 metric tonnes, an increase of 10.0% from fiscal year 2014, while those by domestic Group companies totaled 382 metric tonnes, up 8.0%. The principal factor behind these increases is malfunctioning solvent recovery equipment at three sites, which resulted in a decrease in the equipment's hours of operation.

### Emissions of Targeted Chemical Substances into the Air (551 Substances and One Substance Group)

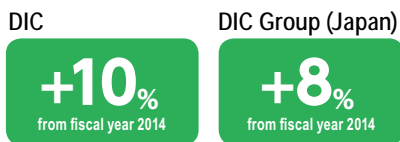


Overseas, Group companies in Greater China and the Asia-Pacific region are using MBO to promote ongoing emissions reductions. In the PRC, in particular, the Group is updating facilities and stepping up management practices in response to the tightening of regulations governing emissions of VOCs.



Updated emissions treatment facilities

### Emissions of VOCs into the Air in Fiscal Year 2015



### 2 Managing Water Resources

Usable fresh water on the earth's surface is said to account for only around 0.01% of the planet's total fresh water resources. Accordingly, finding effective ways to conserve and manage water resources is a crucial global challenge. The DIC Group withdraws fresh water (tap water and industrial water) for use in production processes and air conditioning and for drinking, among others. The Group also discharges wastewater—after purifying it in line with internal standards that exceed official standards in the countries and territories where it has operations—into rivers and other fresh water bodies. At major sites, the Group recovers purified wastewater and reuses it in production processes, helping reduce both fresh water withdrawn and wastewater discharged by these sites.

Fresh Water Withdrawn by the Global DIC Group in Fiscal Year 2015

**40,925,000 m<sup>3</sup>**

**1.6 times**  
the fiscal year 2014 level

Wastewater Discharged by the Global DIC Group in Fiscal Year 2015

**29,396,000 m<sup>3</sup>**

**2.1 times**  
the fiscal year 2014 level

In fiscal year 2015, the DIC Group promoted improvements to production processes and the sharing of information Groupwide, as well as sought to integrate data relevant to fresh water withdrawn and used and wastewater discharged. Nonetheless, fresh water withdrawn by the global DIC Group amounted to 40,925,000 m<sup>3</sup>, 1.6 times the fiscal year 2014 level, comprising withdrawals by the DIC Group in Japan of 30,063,000 m<sup>3</sup>, up 2.4 times, and by Group companies overseas of 10,862,000 m<sup>3</sup>, an increase of 5.0%. Wastewater discharged by the global DIC Group in fiscal year 2015 amounted to 29,396,000 m<sup>3</sup>, 2.1 times the fiscal year 2014 level. The principal reason behind the increase in fresh water withdrawn was the fact that domestic Group companies with abundant water rights (14,000,000 m<sup>3</sup>/year) were newly included in the scope of reporting. The principal reason behind the increase in fresh water withdrawn was the fact that domestic Group companies with abundant water rights (14,000,000 m<sup>3</sup>/year) were newly included in the scope of reporting.

### 3 Soil and Groundwater Pollution Studies

Japan's Water Pollution Control Act was revised in 2012 to tighten structural standards governing equipment installed to prevent groundwater contamination caused by chemical substances. In addition to complying strictly with this Act and with the Soil Contamination Countermeasures Act, the DIC Group in Japan implements soil and groundwater surveys and countermeasures as necessary and assesses related environmental and safety risks.

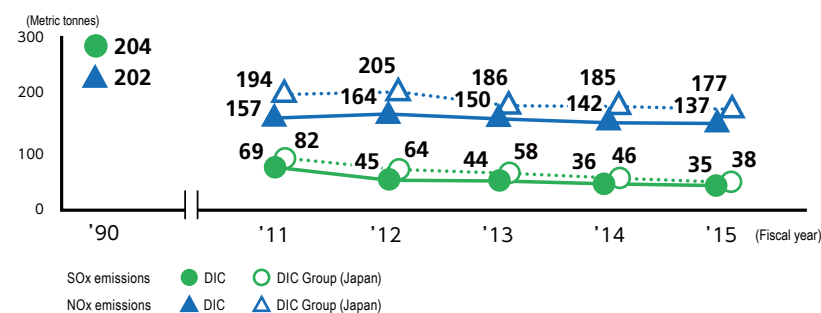
### 4 Reducing SO<sub>x</sub>, NO<sub>x</sub> and COD

Taking fiscal year 1990 as the base year, DIC Group companies in Japan have worked to reduce sulfur oxide (SO<sub>x</sub>) and nitrogen oxide (NO<sub>x</sub>) emissions—key causes of acid rain—from boilers. The Group is also working to reduce chemical oxygen demand (COD), an indicator of water quality deterioration in wastewater, thereby enhancing its water quality management.

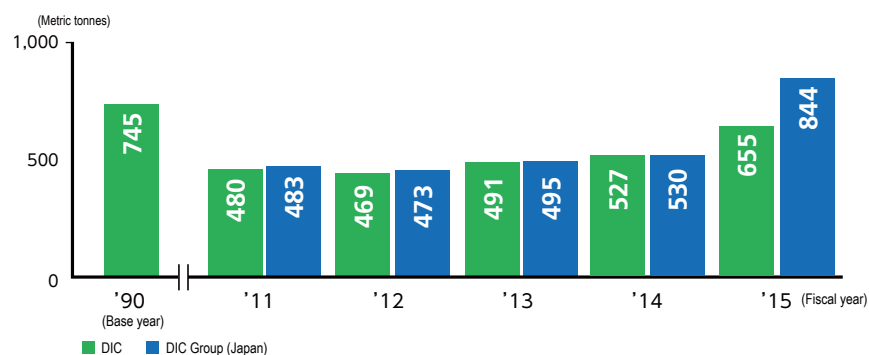
Overseas, Group companies are also switching fuel from light oil to natural gas and replacing light oil-fired and heavy oil-fired boilers with waste wood-fired biomass boilers at sites with appropriate infrastructure.

In the area of water quality management, the Group is also working to protect the environment, including promoting the reuse of water and installing closed-loop water recycling and wastewater treatment systems at its sites that purify water to a level that exceeds the legally mandated standard.

#### SO<sub>x</sub> and NO<sub>x</sub> Emissions Volumes



#### COD



### 5 Complying with Regulations Governing Emissions of Dioxins

In Japan, the DIC Group monitors emissions of dioxins from waste incinerators that produce these byproducts, a group of compounds with diverse possible isomers of varying toxicities. At present, the Group has six such facilities. Continuous efforts to reduce emissions levels have enabled the Group to achieve results that greatly surpass standards specified in the Law Concerning Special Measures Against Dioxins.

#### Dioxin Emissions from Domestic DIC Group Incinerators

Site	Scale of facility (incinerating capacity)	Waste gas		Wastewater	
		Standard (ng-TEC/Nm <sup>3</sup> )	Emissions reported in fiscal year 2015 (ng-TEC/Nm <sup>3</sup> )	Standard (ng-TEC/Nm <sup>3</sup> )	Emissions reported in fiscal year 2015 (ng-TEC/Nm <sup>3</sup> )
Chiba Plant (DIC)	Approx. <b>3</b> metric tonnes/hr	<b>5.0</b>	<b>1.21</b>	<b>10</b>	<b>0.16</b>
Hokuriku Plant (DIC)	<b>0.28</b> metric tonnes/hr	<b>5.0</b>	<b>0.00000039</b>	<b>10</b>	<b>0.00029</b>
DIC Interior Co., Ltd.	Approx. <b>0.1</b> metric tonnes/hr	<b>10.0</b>	<b>0.063</b>	NA	—
Hokkaido Plant (DIC Kitanihon Polymer Co., Ltd.)	Approx. <b>0.2</b> metric tonnes/hr	<b>10.0</b>	<b>0</b>	NA	—
Tohoku Plant (DIC Kitanihon Polymer Co., Ltd.)	Approx. <b>0.2</b> metric tonnes/hr	<b>10.0</b>	<b>0.00000057</b>	NA	—
Harima Plant (Seiko PMC Corporation)	Approx. <b>0.2</b> metric tonnes/hr	<b>10.0</b>	<b>&lt;0.07</b>	NA	—

# Reducing Industrial Waste

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Reduce industrial waste disposed of as landfill (achieve "zero emissions").	Reduce industrial waste disposed of as landfill (maintain "zero emissions"): DIC Group (Japan): 81.5 metric tonnes (+1.8% from fiscal year 2014)	DIC Group (Japan): 139.9 metric tonnes (+73.8% from fiscal year 2014) ("zero emissions" maintained)	★★	Implement measures at each site with the following goal: • Reduce industrial waste disposed of as landfill (for sites that have achieved "zero emissions," maintain that status) (cumulative total of targets for domestic production facilities: 64.2 metric tonnes (-54% from fiscal year 2015)). • Reduce industrial waste generated by production facilities 1.0% (cumulative total of targets for domestic production facilities: 29,127 metric tonnes (up slightly from fiscal year 2015)).
Reduce industrial waste generated by production facilities.	DIC Group (Japan): 29,682 metric tonnes (-4.4% from fiscal year 2014)	DIC Group (Japan): 28,963 metric tonnes (-6.7% from fiscal year 2014)	★★★	
Promote recycling.	Promote recycling at DIC Group companies and strive to improve resource recycling.	DIC Group (Japan) resource recycling rate: 89% (+4 percentage points from fiscal year 2014)	★★★	Promote recycling at DIC Group companies and strive to improve resource recycling.

## Basic Approach

The DIC Group aims to minimize industrial waste by recycling and reusing materials. Since fiscal year 2001, DIC has been involved in a zero emissions initiative\* aimed at reducing industrial waste disposed of as landfill. DIC has deployed zero emissions initiatives at DIC Group companies in Japan since fiscal year 2008. With the aim of expanding efforts across the global DIC Group, in fiscal year 2013 DIC began to introduce MBO at overseas Group companies. DIC subcontract the treatment of industrial waste to be disposed of as landfill, and ensures that waste is properly treated by promoting strict compliance and on-site confirmation by designated departments at each of its production facilities.

\* Zero emissions initiatives: DIC is promoting initiatives aimed at reducing the volume of waste disposed as landfill 95% from the fiscal year 2000 level.

## Principal Initiatives in Fiscal Year 2015

### Reducing Industrial Waste Disposed of as Landfill

The DIC Group works actively to reduce its disposal of industrial waste as landfill by recycling cinders, dust and sludge into, among others, roadbed materials and raw materials for cement, using thermal recycling to recover waste heat and reducing production losses by increasing yields.

### Initiatives in Japan

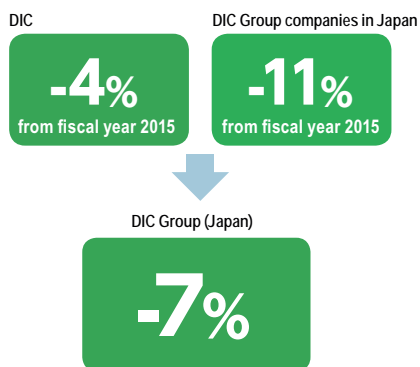
In fiscal year 2015, DIC pressed forward with a number of key ongoing initiatives. However, contamination with household metal and coatings waste necessitated the disposal of wood chips procured as fuel for the Kashima Plant's biomass boiler as landfill, as a consequence of which waste disposed of as landfill in fiscal year 2015 by DIC rose to 116.4 metric tonnes, 2.4 times the fiscal year 2014 level (49.0 metric tonnes). The Company continued to advance measures designed to reduce the volume of waste it disposes of as landfill. These included searching for new processing firms that recycle recovered waste metal and coatings.

In contrast, industrial waste generated by domestic DIC Group companies declined approximately 11% from the fiscal year 2014 level, thanks to efforts to make effective use of wastewater in production processes. As a consequence, the total volume of industrial waste disposed of as landfill by the DIC Group in Japan was 139 metric tonnes, 1.7 times the fiscal year 2014 level (80.0 metric tonnes), with the principal contributing factor being the increase at the Kashima Plant resulting from the issue with biomass boiler fuel.

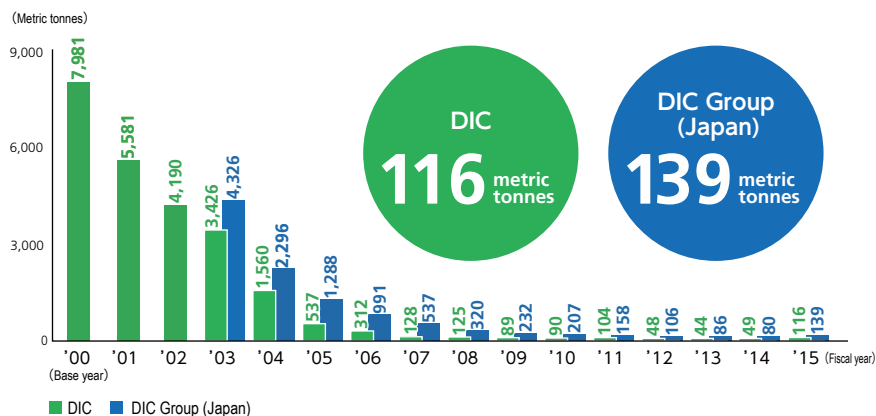
In fiscal year 2016, each DIC Group company in Japan will step up the implementation of measures aimed at reducing the total volume of industrial waste generated by its production facilities by 1% from the fiscal year 2015 level and/or reduce the volume of industrial waste they dispose of as landfill, while at the same time promoting zero emissions initiatives.

DIC and domestic DIC Group companies also continued working to ensure the appropriate disposal of waste polychlorinated biphenyls (PCBs) in fiscal year 2015. In addition, these companies promoted the strict management of unprocessed waste, including transformers, capacitors and stabilizers, through proper collection and storage in dedicated warehouses.

### Industrial Waste Generated in Fiscal Year 2015



### Industrial Waste Disposed of as Landfill



### Initiatives Overseas

In addition to ensuring the disposal of industrial waste in a manner that complies with national and regional legal and regulatory requirements, the DIC Group's overseas production facilities work to minimize industrial waste through the voluntary recycling and reuse of materials. In fiscal year 2013, overseas Group companies sought to reinforce efforts to reduce industrial waste by introducing MBO.

In fiscal year 2015, DIC Group companies in the Americas and Europe, Greater China and the Asia-Pacific region deployed measures aimed at achieving reductions in industrial waste generated during various production processes that exceeded nationally and regionally mandated levels. Nonetheless, the total volume of industrial waste generated by DIC Group production facilities overseas rose 6.2%. Looking ahead, regional headquarters in these areas will focus on further reinforcing compliance with local laws and regulations while at the same time cooperating with DIC's Responsible Care and Production Management departments to analyze the reasons for this increase with the aim of limiting the generation of industrial waste and reducing the volume of industrial waste disposed of as landfill.

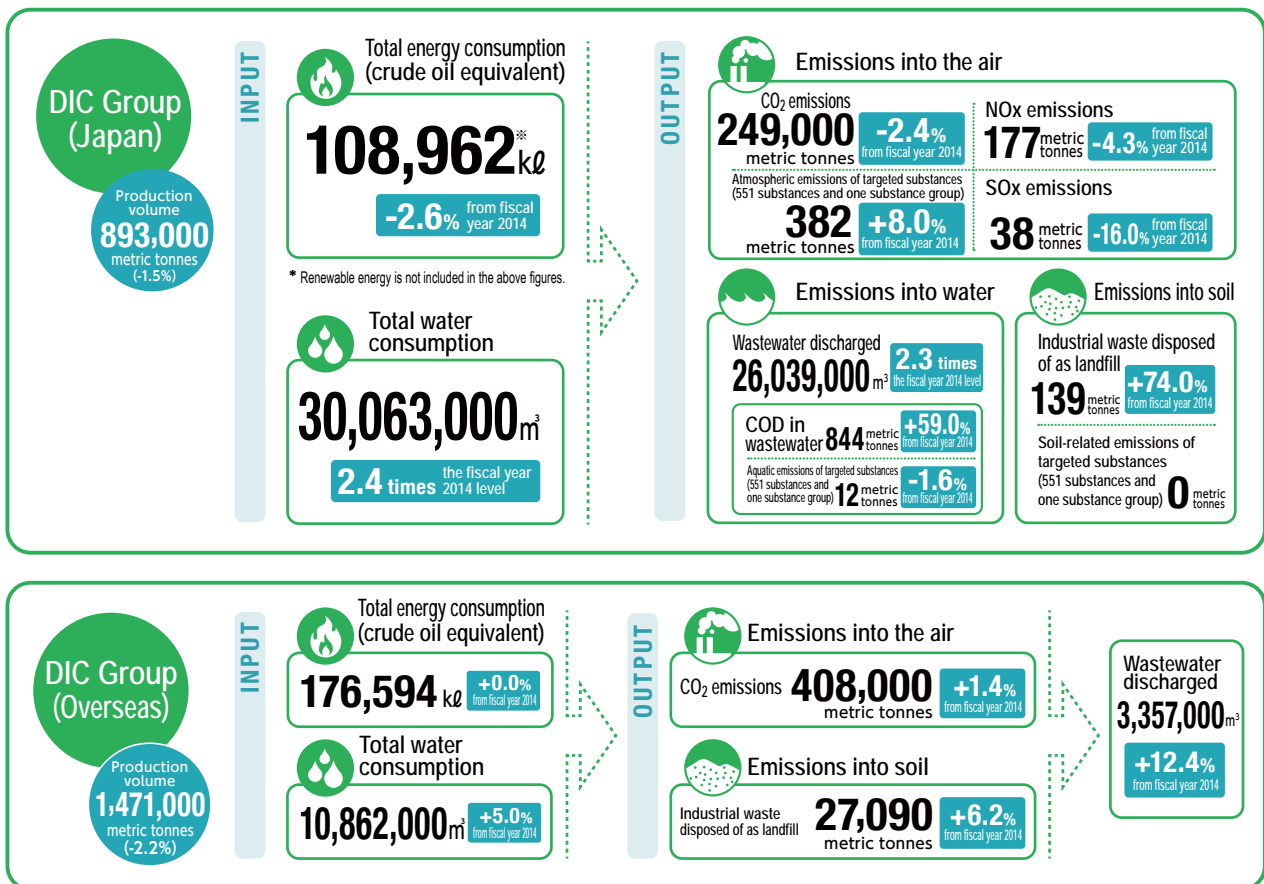


Wastewater treatment facility (DIC (Malaysia) Sdn. Bhd.)

## Overview of Environmental Impact of the DIC Group's Operating Activities

The DIC Group quantifies its environmental inputs (resources consumed), such as energy and water consumption, and outputs, that is, emissions into the environment, and uses its findings to formulate comprehensive and efficient strategies for reducing its environmental footprint.

The chart below is a comprehensive illustration of the environmental impact of the DIC Group's domestic operating activities in fiscal year 2015. The chart shows the environmental impact for two input items (total energy consumption and total water consumption) and six output items (emissions of 551 chemical substances (including those designated under the PRTR\*) and one substance group\*\*<sup>2</sup>, emissions of CO<sub>2</sub>, emissions of NOx, emissions of SOx, COD in wastewater and industrial waste disposed of as landfill).



\*1 The PRTR is a scheme for assessing, aggregating and disseminating data on the sources of hazardous chemicals, amounts released into the environment and amounts transferred off-site from industrial establishments via waste products.

\*2 The "551 substances and one substance group" comprises 462 chemical substances designated by the PRTR and 89 substances and one substance group targeted for study by the JCIA.

# Managing Chemical Substances in Products

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Respond to requirements relating to chemical product information.	Provide education for employees of DIC Group companies and affiliates in the PRC regarding legal and regulatory compliance.	<ul style="list-style-type: none"> <li>Prepared for the assignment of full-time managers in charge of legal and regulatory compliance to regional headquarters.</li> <li>Reinforced local information gathering configuration.</li> </ul>	★★★	<ul style="list-style-type: none"> <li>Assign full-time managers in charge of legal and regulatory compliance to regional headquarters.</li> <li>Expand local information gathering configuration.</li> </ul>
Comply with overseas regulations (e.g., the EU REACH regulation).	<ul style="list-style-type: none"> <li>Promote use of the Wercs at overseas Group companies.</li> <li>Comply with Taiwan's Toxic Chemical Substances Control Act and Occupational Safety and Health Act.</li> </ul>	<ul style="list-style-type: none"> <li>Promoted use of the Wercs at overseas Group companies.</li> <li>Took steps to comply with Taiwan's Toxic Chemical Substances Control Act and Occupational Safety and Health Act.</li> </ul>	★★★	<ul style="list-style-type: none"> <li>Continue to promote use of the Wercs at overseas Group companies.</li> <li>Continue taking steps to comply with Taiwan's Toxic Chemical Substances Control Act and Occupational Safety and Health Act.</li> <li>Promote the registration of chemical substances to which REACH requires.</li> </ul>

## Promoting Safety for Chemical Substances and Products

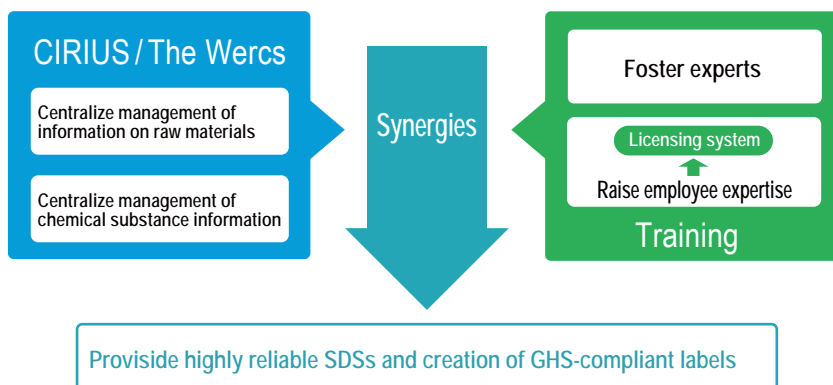
### Basic Approach and Framework for Implementation

In 2003, the UN Economic Commission for Europe issued the first edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), the idea being to reduce chemical risks through an internationally harmonized approach to classification of chemicals by type and toxicity, the clear display of information on labels for better understanding and the provision of SDSs.

To respond swiftly to requests to reduce risks by providing customers with sufficient information on hazards associated with chemical substances, DIC established CIRIUS (Chemical Substance Information Comprehensive Management System) for domestic products in 2009. CIRIUS centralizes the management of information about raw materials and chemicals to facilitate the provision of reliable SDSs. The system also automatically checks various laws and regulations. These include security export control rules, the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the Industrial Safety and Health Act and the Poisonous and Deleterious Substances Control Act. In 2013, DIC began using the Wercs (a global SDS and label creation system developed with know-how from DIC) for products for export. As a result, DIC now has a structure that enables it to compile SDSs for more than 250,000 products that comply with national and regional laws and regulations and is accessible in all necessary local languages. In April 2014, DIC began using the Wercs to issue SDSs and labels for all exported products.

As specialized expertise in chemical substance management is essential, DIC focuses on training in the manufacture, import and handling of chemicals in accordance with applicable laws and regulations and draws on its proprietary licensing system to enhance the skills of employees.

### Framework for Promoting the Safety of Chemical Substances and Products



## Reducing Risks by Providing Information Worldwide

### Maximizing the Wercs Global SDS and Label Creation System

In April 2013, DIC centralized the management of information on the composition of chemical substances in exported products and on chemical substance legislation in various countries and regions, switching to the Wercs, a new system that automatically creates product SDSs in the language—and in compliance with the laws and regulations—of individual export destinations, creating a foundation for its global information system and helping reduce risks for customers.

DIC employs CIRIUS to centrally manage raw materials and chemical substance information for products manufactured in Japan. CIRIUS automatically checks the Foreign Exchange and Foreign Trade Act, the Security Trade Control Law, the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., and the Chemical Substances Control Law, as well as the Industrial Safety and Health Act and the Poisonous and Deleterious Substances Control Act, to swiftly supply highly reliable SDSs.

For products for export, DIC traditionally responded to regulatory requirements on a country-by-country basis by using software and outsourcing procedures to third parties. The Wercs, which incorporates know-how accumulated by DIC in the creation and use of CIRIUS, was developed with the aim of expediting the provision of such information. The Wercs facilitates the translation of data into 46 different languages—including the languages of the 19 countries and territories to which DIC currently exports products—and the preparation of SDSs and labels in local languages that comply with the laws and regulations of countries and territories in the Americas, Europe, Asia and elsewhere.

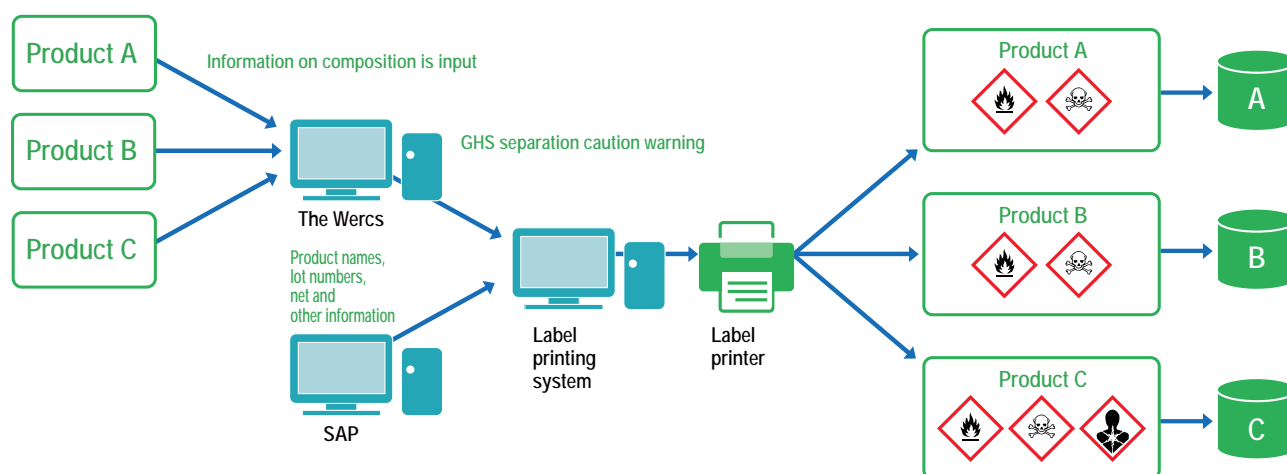
Since switching to the Wercs for creating SDSs and issuing labels for exported products, DIC has expanded the number of countries for which it can prepare local-language, legally compliant SDSs and labels to include the ROK, Europe, the United States, the PRC and Taiwan. Since April 2014, all SDSs and labels for products for export have been prepared using the Wercs. DIC is also promoting deployment of the system to Group companies in Japan, which are using the Wercs in tandem with CIRIUS to ensure the effective management of chemical substances across the Group's domestic supply chain.

In addition, with the aim of promptly updating its labels to comply with GHS hazard labelling standards in the event of revisions to laws and regulations or the identification of new hazards, the Company is setting up an on-demand label printing system that links the Wercs with production lines.



DIC provides information on chemical substances using CIRIUS in Japan and the Wercs overseas.

### On-Demand Label Printing System Flowchart





## Complying with Laws and Regulations

### Collecting, Analyzing and Communicating the Latest Information

The principal goal governing the management of chemical substances worldwide is the goal, agreed upon at the World Summit on Sustainable Development (WSSD) in 2002, which is to ensure, by 2020, that chemicals are used and produced in ways that lead to the minimization of significant adverse effect. Recent years have seen the European Union (EU) enact the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)\* regulation, and the ROK, the PRC and Taiwan introduce legislation aimed at strengthening chemical substance risk management. As well, countries around Southeast Asia have deployed GHSs.

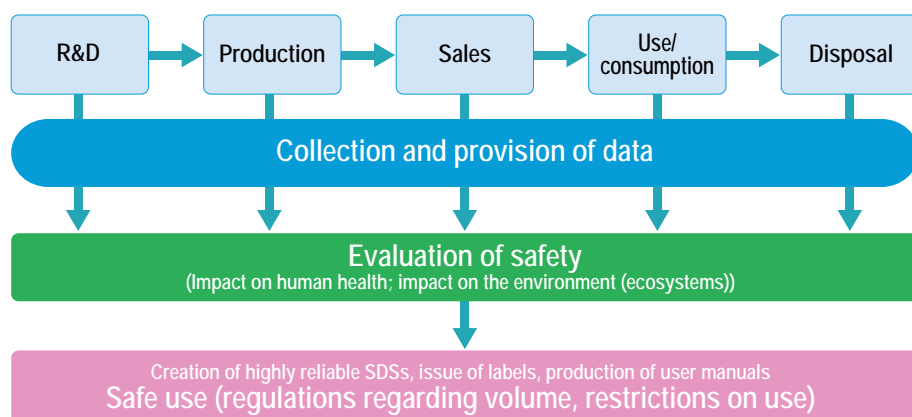
DIC collects the latest information on chemical substances through international consultants and experts, news wire services and chemicals industry associations to ensure that it can respond swiftly and effectively to revisions in laws. The Company supplies the latest information to its customers by creating SDSs and issuing labels. In fiscal year 2013, DIC switched to the Werchs for creating SDSs and issuing labels for existing exported products.

In fiscal year 2015, steps were taken across Asia to reinforce the management of chemical substances. Of particular note, the ROK's Act on the Registration and Evaluation of Chemicals (K-REACH) came into force, while the PRC published the Catalog of Hazardous Chemicals (2015). In response, DIC worked steadily to strengthen communications with local Group companies and to analyze information and submit applications for registration of pertinent chemical substances.

In advance of the May 2018 deadline for registering existing chemical substances under REACH, DIC is registering existing exported low-volume chemical substances, i.e., those produced in volumes of up to 100 metric tonnes per year, as well as promoting ongoing efforts to respond to substance evaluations by the European Chemicals Agency (ECHA) and member states in the EU and collecting information on REACH substances of very high concern (SVHCs), restricted substances and authorized substances.

\* Under REACH, businesses bear full responsibility for evaluating the safety of chemical substances they produce and/or use with no distinction made between "existing" and "new" substances. REACH also prohibits the use of specified chemical substances that pose unacceptable risks to human health.

### Global Chemical Substance Management Flowchart



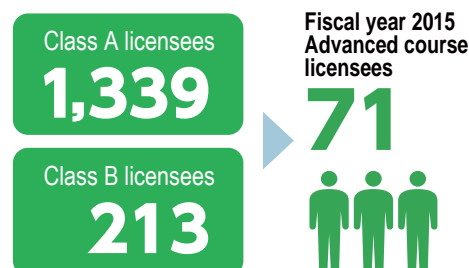
### Training in Chemical Substance Management

Compliance with laws and ordinances is a fundamental requirement for DIC as a comprehensive chemicals manufacturer and thus central to risk management. Accordingly, the Company endeavors to improve employees awareness and knowledge of chemical substance regulations in Japan and overseas by holding workshops and maintaining a proprietary internal licensing system.

Efforts include providing specialized training for individuals involved in exporting chemical substances in line with the Foreign Exchange and Foreign Trade Act, and for individuals involved in importing substances in line with the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the Industrial Safety and Health Act and the Poisonous and Deleterious Substances Control Act. DIC only licenses employees who have completed designated training and passed in-house examinations. The licenses are valid for either two or three years. Licenses permit these individuals to engage in import and export operations. To renew their licenses, they must retake classes and pass the subsequent exams.

As of fiscal year 2015, 1,339 employees had qualified for a Class A license, which requires specialized knowledge. Another 213 people had passed the exam for a Class B license, which pertains to ancillary operations. In fiscal year 2015, DIC established a new advanced course, in which 71 individuals earned licenses.

Recognizing the importance of fostering experts with sophisticated specialized knowledge, DIC Group companies overseas also promoted a variety of initiatives. In fiscal year 2016, companies in Greater China plan to stage a group training session with consultants as instructors.



## Holding Seminars on the Wercs in Greater China and the Asia-Pacific Region

In keeping with the full-fledged global deployment of the Wercs, DIC has dispatched Responsible Care Department officers to hold five seminars in Greater China and the Asia-Pacific region (Taiwan, Thailand, Malaysia and Indonesia) since fiscal year 2014.

Such seminars go beyond officers explaining the operations and advantages of the Wercs. It is important for participants to understand the background and intent of legal revisions and steadily amass basic data and update information. Constantly introducing such information into systems maximizes the potential of the Wercs, making it possible to provide valuable and timely information to customers and reduce overall social risks.

Taking the opinions and impressions of seminar participants into consideration, DIC will continue to promote efforts to improve operability and data transmission speed with the aim of improving the Wercs and making it easier to use.



The Wercs seminar

## VOICE from the DIC Group

### The Wercs has automated and enhanced the flexibility of procedures used in the creation of SDSs.

In light of heightened global awareness of safety and the need to comply with pertinent laws and regulations, the Wercs, a comprehensive software, provides a simple, convenient way to create SDSs and issue GHS labels. DIC (Malaysia) currently exports a significant volume of its products. The introduction of the Wercs has made it possible for us to create SDSs and issue GHS labels in multiple different languages.

The Wercs has automated and enhanced the flexibility of procedures used in the creation of SDSs. It has also provided us with an effective way to manage global compliance over the long term.

Using the Wercs makes it possible for us to direct our time, energy and efforts to contributing to future growth.

Assistant Manager, Technical Administration R&D Center, DIC (Malaysia) Sdn. Bhd. **Chuah Joo Beng**



## VOICE from the DIC Group

### We are working to reinforce information gathering and training systems in Greater China and the Asia-Pacific region.

Fiscal year 2015 brought the full-fledged implementation and/or strengthening of legislation pertaining to chemical substances in Taiwan, the PRC and the ROK. DIC and local Group companies have worked together closely to respond, but the burden of organizing and confirming individual registration lists and data is substantial. Regulations governing chemical substances vary considerably in different countries and regions in terms of both framework and procedures for implementation. Responding smoothly and efficiently thus requires an extensive information network able to discern trends promptly and capable local staff. Accordingly, we continue to promote a variety of measures, including joining local chambers of commerce and using local consulting firms to gather information, as well as working to foster human resources at local subsidiaries.

Looking ahead, we will continue to communicate closely with government, industry and academic organizations in multiple fields while at the same time working to fulfill our responsibilities to society as a comprehensive chemicals manufacturer.

Senior Manager in charge of regulatory affairs, Responsible Care Department **Masato Akama**



# Report on Other Initiatives

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Report on Responsible Care initiatives and prepare business site reports.	<ul style="list-style-type: none"> <li>Step up efforts to enhance the DIC Group's performance.</li> <li>Promote ongoing Responsible Care initiatives tailored to local markets.</li> </ul>	Steps were taken to establish a foundation for the creation of a system for standardizing performance data that takes into account both the laws and regulations of each country/region and local Group businesses.	★★★	<ul style="list-style-type: none"> <li>Reinforce and expand efforts to enhance the DIC Group's performance.</li> <li>Promote ongoing Responsible Care initiatives tailored to local markets.</li> </ul>
Implement measures for PCBs.	<ul style="list-style-type: none"> <li>Maintain system for storing and managing PCBs.</li> <li>Promote the proper disposal of equipment containing PCBs.</li> </ul>	PCB waste was collected and stored in an appropriate manner and disposed of in accordance with the practices of the Japan Environmental Storage & Safety Corporation (JESCO).	★★★	<ul style="list-style-type: none"> <li>Maintain system for storing and managing PCBs.</li> <li>Promote the proper disposal of equipment containing PCBs.</li> </ul>
Protect the ozone layer.	<ul style="list-style-type: none"> <li>Reinforce framework for managing equipment containing CFCs.</li> <li>Continue promoting efforts to avoid the adoption of new raw materials containing specified CFCs.</li> </ul>	<ul style="list-style-type: none"> <li>The adoption of new raw materials containing specified CFCs was avoided.</li> <li>In accordance with Japan's revised Act on Ensuring the Implementation of Recovery and Destruction of Fluorocarbons concerning Designated Products, the amount of CFCs leaked at domestic DIC Group companies was ascertained.</li> </ul>	★★★	<ul style="list-style-type: none"> <li>Reinforce framework for managing equipment containing CFCs.</li> <li>Continue promoting efforts to avoid the adoption of new raw materials containing specified CFCs.</li> <li>Continue to ascertain the amount of CFCs leaked at domestic DIC Group companies and promote measures to prevent leakage.</li> </ul>
Asbestos	Ensure awareness of the potential risks associated with the discovery of asbestos during demolition or when retrofitting equipment and appropriate responses.	Materials containing asbestos, including insulation, were discovered during the removal of equipment and were removed and disposed of in a legally appropriate manner.	★★★	Ensure awareness of the potential risks associated with the discovery of asbestos during demolition or when retrofitting equipment and appropriate responses.
Train raw materials and product safety experts.	<ul style="list-style-type: none"> <li>Enhance the capabilities of ESH coordinators in Greater China and the Asia-Pacific region.</li> <li>Educate employees about chemical substances in raw materials and products and about compliance with related laws and regulations and build a framework for such activities.</li> </ul>	<ul style="list-style-type: none"> <li>Support was provided for efforts to enhance the capabilities of ESH coordinators in Greater China and the Asia-Pacific region.</li> <li>In Greater China, the role of ESH coordinators in industry organizations was expanded.</li> </ul>	★★★	<ul style="list-style-type: none"> <li>Provide support and direction for efforts to enhance the capabilities of ESH coordinators in Greater China and the Asia-Pacific region.</li> <li>Continue to provide and increase the sophistication of education, training and direction.</li> <li>Promote expert-led training for employees regarding laws and regulations.</li> </ul>

# Enhancing Product Quality and Customer Satisfaction

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★ ★ = Excellent; ★ ★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Secure product quality.	Improve internal audits, viewing them as an opportunity to enhance quality management.	Information on best practices and internal audit methods, including for the domestic DIC Group, was published in-house and initiatives aimed at enhancing internal audits were rolled out Groupwide.	★ ★ ★	Firmly establish and promote awareness of product quality as essential to upholding a sound operating foundation.
	Create a framework that will further strengthen the DIC Group's QMS.	A Quality Assurance Department was established within DIC Corporation to coordinate quality management across the DIC Group and quality assurance sections were established within each product division, facilitating the division of functions and creating a QMS that is both prompt and meticulous.	★ ★ ★	Promote efforts to secure product quality through collaboration between the Quality Assurance Department and product division quality assurance sections.

## Basic Approach

Along with its Environment, Safety and Health Policy, the DIC Group views the improvement of product quality as a theme that is essential to upholding a sound operating foundation. Accordingly, the Group seeks to ensure every employee shares the sentiment conveyed in its Quality Policy and works continuously to enhance quality and ensure customer satisfaction.

## DIC's Quality Policy

"Contribute to the prosperity of customers and society by consistently providing reliable products."

## Framework for Implementation

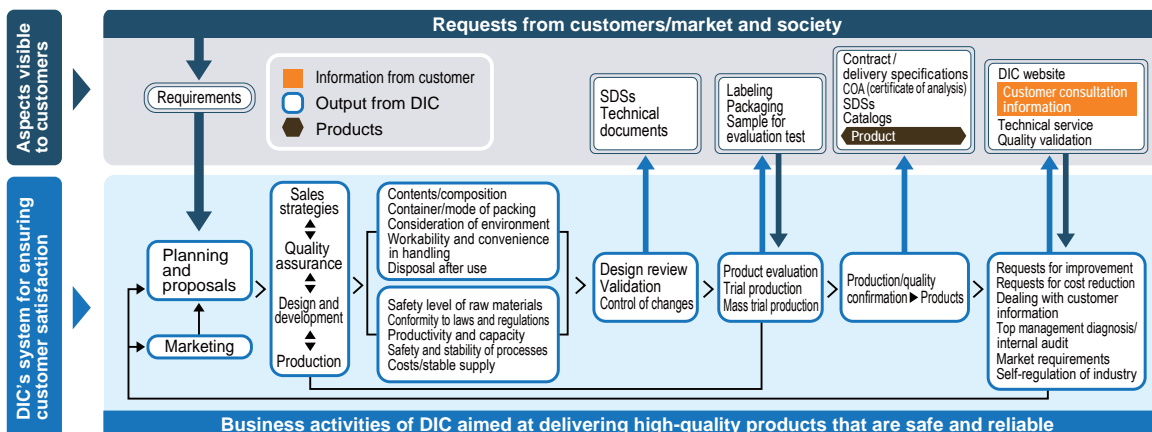
To better leverage its agility and comprehensive capabilities, DIC previously realigned its overall quality management system (QMS), establishing a matrix-like corporate organization that positions product divisions on the vertical axis and the Production Administrative Division and the Technical Administrative Division on the horizontal axis. In line with this change, the Group introduced a QMS based on ISO 9001, the International Organization for Standardization's benchmark for such systems, and subsequently earned ISO 9001 certification for all of its production facilities. The Group capitalizes on this QMS and on its overall system to promote ongoing efforts to enhance quality.

In line with its belief that the improvement of product quality is essential to upholding a sound operating foundation, in fiscal year 2015 DIC established the Quality Assurance Department, as well as set up quality assurance sections within each product division, with the goal of further reinforcing QMS across the entire DIC Group. By thus dividing product-specific QMS and Groupwide QMS, the Group has succeeded in creating a QMS that is both prompt and meticulous.



## 1 Initiatives Aimed at Increasing Customer Satisfaction

Close cooperation among relevant divisions and departments from product planning through to shipment enables DIC to develop and manufacture products with high added value, while rigorous process and identification management ensure product quality. Meticulous risk evaluation is conducted at the design review stage to guarantee safety. After products are sold, customer and market assessments are gathered and fed back to development departments to facilitate further quality improvements.



## 2 New Efforts to Enhance Employee Education in the Area of Product Quality

Committed to providing safe products that customers feel secure using and are satisfied with, DIC recognizes the importance of ensuring that employees maintain a high awareness of quality, as well as a constant commitment to achieving further quality improvements and upholding high quality standards. In fiscal year 2015, the Company began providing education regarding product quality to all DIC Group employees. Beginning in fiscal year 2016, the Company also offers training led by external experts in the field for employees involved in quality management. Going forward, DIC will continue working to establish and promote awareness of product quality as essential to upholding a sound operating foundation.



Training session

## 3 Preventing the Recurrence of Problems

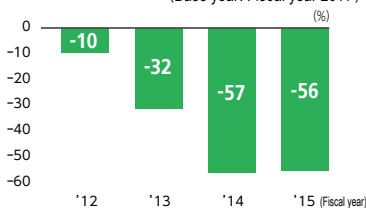
Information on quality problems (complaints and criticisms) that arise is collated and analyzed and then shared across the Group to prevent recurrence. To discover the causes of such problems, the Group employs “why-why analysis” (“*naze-naze bunseki*”).

Why-why analysis involves repeatedly asking “why” to encourage people not to jump to conclusions, but rather to investigate and identify the actual root causes of such problems, thereby making it possible to prevent recurrence. DIC also applies why-why analysis in determining the causes of accidents, an approach that continues to yield solid results. In fiscal year 2015, training in why-why analysis was introduced for back-office functions with the goal of reducing/preventing the recurrence of mistakes made in the receipt and placing of orders.

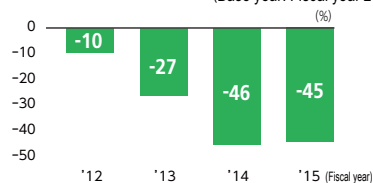
In 2011, DIC began publishing *Quality News*, which provides useful information on quality management and ways to enhance work quality. In addition to being published regularly on DIC’s portal site and distributed directly to relevant parties, *Quality News* is used in employee training.

### Change in the Number of Quality Problems

Change in the Number of Product Returns  
(Base year: Fiscal year 2011)



Change in the Number of Complaints Received  
(Base year: Fiscal year 2011)



## VOICE from the DIC Group

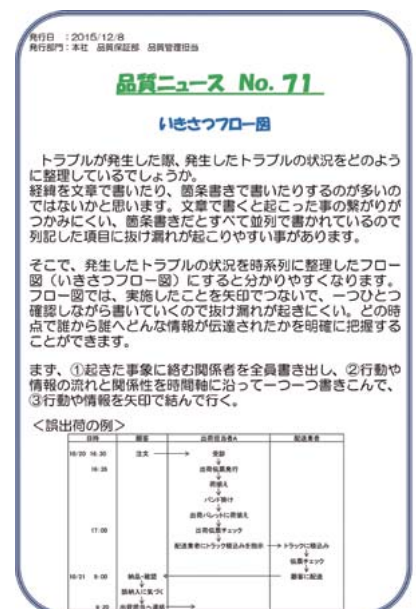
**Our goal is to ensure the satisfaction of customers by providing safe products and services that they can use with confidence.**

In fiscal year 2015, DIC established the Quality Assurance Department, a move designed to further strengthen the Group’s QMS. We collaborate with the quality assurance sections of product divisions to ensure awareness of DIC’s Quality Policy and implement a variety of related measures. Product divisions work to enhance quality at all stages of a product’s life cycle, from planning, development and the selection of raw materials through to production, disposal and recycling. The Quality Assurance Department is responsible for fostering human resources conducive to achieving further quality improvements. Accordingly, we focus on planning and promoting educational programs that increase awareness of quality and improving quality management skills.

General Manager, Quality Assurance Department **Yuuichi Kougo**



*Quality News* Issue No. 71, published in December 2015



# Working to Enhance Job Satisfaction

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Foster and endorse the advancement of local staff overseas with the aim of advancing global management.	Assess the state of human rights and labor practices based on the results of voluntary inspections and explore approaches for ongoing initiatives, including voluntary inspections.	The results of voluntary human rights inspections conducted at 59 DIC Group companies were assessed and no violations were found to exist. Going forward, steps will be taken to disclose information regarding the DIC Group Code of Business Conduct and efforts to advance employee awareness with the goal of demonstrating the Group's understanding of and commitment to human rights to encourage stakeholder recognition thereof.	★★	Continue working to assess the state of human rights and labor practices based on the results of voluntary inspections. Promote the creation of a unified policy regarding personnel systems, evaluation and remuneration for Group company presidents and product division heads in Japan, the Asia-Pacific region and Greater China.
	Continue to offer training programs and trainee initiatives.	<ul style="list-style-type: none"> <li>The number of Group employees taking advantage of training programs reached 98% of the Group's projection.</li> <li>A total of 10 trainees were dispatched from Group companies in Japan to overseas Group companies.</li> <li>A total of 10 trainees were dispatched from overseas Group companies to Group companies in Japan.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Continue to offer training programs for employees and executive assistants at DIC Group companies in Japan.</li> <li>Promote the hiring of foreign nationals and continue to implement measures aimed at fostering global employees.</li> </ul>
Encourage women in the workplace with the aim of securing a diverse labor force and supporting diverse working styles.	Establish and deploy an advisor system to support the careers of female employees.	Having identified current issues, DIC established KPIs for assessing efforts to advance the careers of female employees and formulated an action plan for increasing the percentage of management-level positions occupied by women, expanding the range of jobs open to women, encouraging male employees to take childcare leave and increasing the number of new female graduates recruited, in line with Japan's Act on Promotion of Women's Participation and Advancement in the Workplace. Based on this, the Company planned and implemented various measures, including establishing an advisor system to support the careers of female employees.	★★	Enhance measures for advancing the careers of female employees and increase the percentage of new female graduates recruited to 30%-plus.
	Establish key performance indicators (KPIs) for advancing the careers of female employees.			
Promote the hiring of individuals with disabilities with the aim of securing a diverse labor force and supporting diverse working styles.	Increase the number of employees with disabilities to 2.2% of DIC's total labor force, exceeding Japan's legally mandated quota of 2.0%.	As of December 31, 2015, employees with disabilities accounted for 2.1% of DIC's total labor force.	★★	Increase the number of employees with disabilities to 2.2% of DIC's total labor force.

## Basic Approach to Human Resources Management

With the aim of being an organization that empowers all employees to reach their full potential, the DIC Group is committed to respecting human rights and eliminating all forms of discrimination and to creating a work environment that embraces diversity. The Group also strives to support a healthy work-life balance for each employee and create a work environment conducive to job satisfaction and to foster local human resources in markets around the world, which it recognizes as essential to ensuring sustainable corporate growth under its current medium-term management plan.

## Respect for Human Rights

The DIC Group supports and adheres to global codes governing human rights, notably the Universal Declaration of Human Rights. The DIC Group Code of Business Conduct, which outlines standards that DIC Group employees are expected to observe, lays down provisions prohibiting human rights violations and requiring respect for diversity—philosophies that are the foundation of the DIC Group's corporate activities. All DIC Group employees are obliged to provide written pledges to abide by the DIC Group Code of Business Conduct and to conduct themselves as stipulated therein. In fiscal year 2015, a total of 57 domestic and overseas Group companies implemented voluntary human rights and labor practices inspections as part of ongoing efforts to prevent issues from arising. The results of these inspections were assessed and no violations were found to exist.

In fiscal year 2010, DIC became a signatory to the UNGC, pledging its support for the UNGC's 10 principles, which include tenets regarding human rights and labor. The Company continues to implement related initiatives in all areas of its corporate activities to reinforce respect for human rights in the human resources management practices of all Group companies and prevent violations from occurring.

## Building Trust with the DIC Employees' Union

DIC's management and representatives of its employees' union meet regularly with the goal of ensuring healthy industrial relations based on mutual trust. In addition, through labor-management councils and casual management conferences, DIC shares management information and its vision for the future with union representatives and encourages the frank exchange of opinions.

## Global Human Resources Management

The DIC Group has established a global human resources management framework capable of supporting efforts to foster local employees overseas, as well as to hire individuals based on business considerations without regard for nationality. Having created a human resources system and introduced specialized training for the next generation of executives at Group companies in the PRC, the Group has recently taken similar steps for companies in Southeast Asia. Other efforts include creating global human resources databases and establishing systematic training programs.

### Basic Personnel Statistics

		Fiscal year 2013	Fiscal year 2014	Fiscal year 2015
Number of employees	Male	2,842	2,876	2,898
	Female	642	666	683
	Total	3,484	3,542	3,581
Average age	Male	42.2	42.2	42.2
	Female	39.4	39.8	40.3
	Total	41.6	41.7	41.8
Average years of employment	Male	18.2	18.2	18.2
	Female	17.0	17.4	17.7
	Total	18.0	18.1	18.1
New graduates hired	Male	70	72	75
	Female	24	19	20
	Total	94	91	95

		Fiscal year 2013	Fiscal year 2014	Fiscal year 2015
		(Fiscal year 2010 hires)	(Fiscal year 2011 hires)	(Fiscal year 2012 hires)
Retention rate (after three years)	Male	100%	91.2%	95.7%
	Female	100%	100%	100%
	Total	100%	92.6%	96.5%
Separations (voluntary) (number of individuals)	Male	14	23	37
	Female	10	7	8
	Total	24	30	45
Separation rate (voluntary)	Male	0.5%	0.8%	1.3%
	Female	1.6%	1.1%	1.2%
	Total	0.7%	0.9%	1.3%

### Integrating DIC Group Executive Evaluation Systems

The Group has also integrated its evaluation systems for Group company presidents and other executives in Japan and overseas with the goal of encouraging these individuals not only to pursue near-term results for their business units but also to choose management approaches that are optimal for the Group as a whole from both a medium- and long-term perspective. In addition, the Group also integrated its global personnel policies to ensure that remuneration is in keeping with local market levels and individual job responsibilities.

## Promoting Diversity

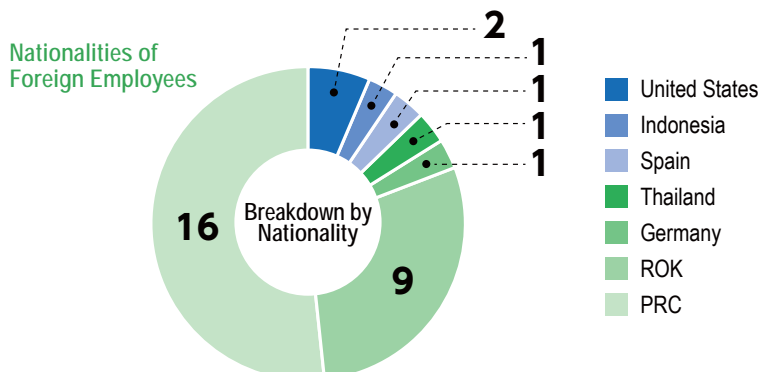
The DIC Group actively pursues diversity by employing a broad spectrum of individuals without regard to considerations such as gender, nationality, physical limitation or age. The Group works to foster a corporate culture that draws on its understanding and respect for diversity to produce creative ideas and to incorporate the concept of diversity into management, thereby creating workplaces that enhance job satisfaction.

### 1 Hiring Diverse Human Resources

With the objective of securing talented individuals with advanced specialized capabilities, global perspectives and language abilities, DIC actively promotes the hiring of international students completing undergraduate or graduate studies at Japanese universities; Japanese and foreign nationals completing undergraduate or graduate studies at overseas universities; and experienced mid-career candidates with extensive experience and expertise. At present, 31 foreign nationals work in various capacities at DIC. Fiscal year 2016 new hires included eight foreign nationals.



New hires for fiscal year 2016 included 8 foreign nationals



### Number of Foreign Nationals Currently Employed by DIC

Sales positions	Technical positions	Corporate administration	Department/division administration	Posted overseas	Total
2	19	5	1	4	31

## VOICE from the DIC Group

I want to use my ability to understand local thinking to serve as a bridge between Japan and overseas markets.

When I joined DIC I had just graduated university in the PRC, spoke no Japanese and didn't really know anything about Japanese companies. I was nervous and uncertain in the beginning, but the workplace atmosphere was great and my superiors and colleagues were kind and patient in teaching me everything I needed to know, so I really enjoyed my job. I am always impressed by my Japanese colleagues' industrious nature and meticulous attention to detail in all aspects of their work, as well as by the corporate culture of Japanese companies, which emphasizes the diligent observation of rules and the creation and provision of safe, high-quality products. In the future, I want to use my ability to understand local thinking to serve as a bridge between Japan and overseas markets with the aim of reinforcing relations and contributing to the success of our LCs business in the PRC and Taiwan.

Fine Synthesis Technical Group 6, Saitama Plant **Wei Wu**



## 2 Expanding Career Opportunities for Women

In line with its commitment to promoting diversity, DIC implements a variety of initiatives to expand career opportunities for female employees. Since launching a full-scale program with this objective in 2007, the Company has pushed ahead with measures to transform the mindset of all employees and its corporate culture, provide education designed to encourage the drive and determination of female employees and broaden the range of jobs open to women. In fiscal year 2015, DIC established the C<sup>3</sup> Advisor System, whereby female employees with experience in handling the demands of career and childcare are appointed to advise their juniors who are currently taking childcare leave on ways to maintain an effective balance once they return to work.

With the goal of being an organization that empowers female employees, DIC will continue to implement initiatives focused on broadening the range of jobs open to women. Through such efforts, the Company aims to boost the percentage of management positions occupied by female employees to 8.0% by fiscal year 2020, from 2.6% in fiscal year 2015. DIC will also continue working to expand its recruitment of new female graduates from technical schools and bachelor's and master's degree programs, both sources of talented human resources. DIC has also formulated an action plan based on Japan's Act on Promotion of Women's Participation and Advancement in the Workplace.

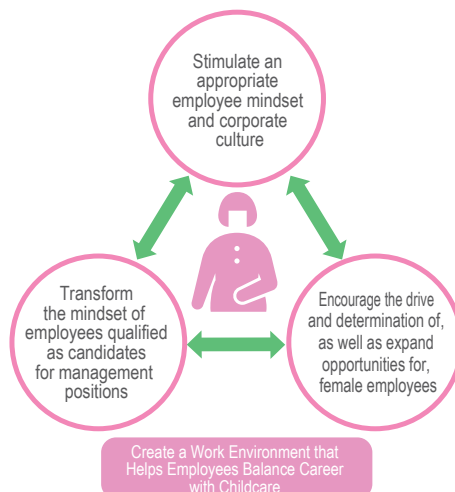
Action plan (published in Japanese only): [http://www.dic-global.com/ja/csr/stakeholder/pdf/promote\\_career\\_opportunities\\_for\\_women.pdf](http://www.dic-global.com/ja/csr/stakeholder/pdf/promote_career_opportunities_for_women.pdf)

### Initiatives Aimed at Expanding Career Opportunities for Women

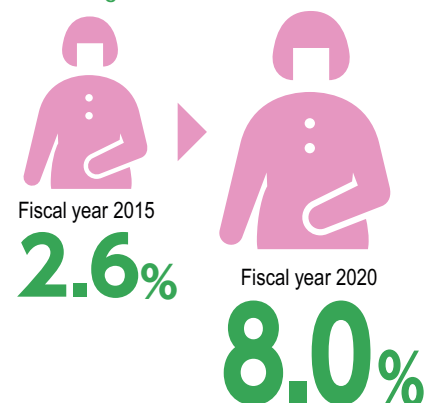
2007   2015	Transform corporate culture and the mindset of management-level employees	<ul style="list-style-type: none"> <li>● Message from the President</li> <li>● Seminars to promote awareness</li> <li>● Identical uniforms for male and female employees</li> <li>● Training for employees in administrative positions</li> </ul>
	Encourage the drive and determination of female employees	<ul style="list-style-type: none"> <li>● Seminars to promote awareness among female employees</li> <li>● Introduction of role models</li> </ul>
	Expand opportunities for female employees	<ul style="list-style-type: none"> <li>● Assignment of female employees to production and sales positions</li> <li>● Inclusion of female employees in regular system of transfers, reassignments and job rotations</li> <li>● Increase in number of women hired</li> </ul>
	Establish systems to support a healthy work-life balance for female employees and encourage the use thereof	<ul style="list-style-type: none"> <li>● Establishment of systems to support a healthy work-life balance</li> <li>● Publication of the Libra work-life balance support guide and introduction of e-learning program for employees taking leave</li> <li>● Introduction of system allowing management-level employees to limit the locations to which they will accept transfers</li> </ul>

### Policy for Advancing the Careers of Female Employees

DIC is committed to creating a work environment in which all employees can fully exercise their abilities. To this end, the Company pledges that female employees shall enjoy equal access to career opportunities as their male counterparts and that no gender-based restrictions or barriers shall be applied.



### Female Employees in Management Positions





## TOPIC

C<sup>3</sup> Advisor System

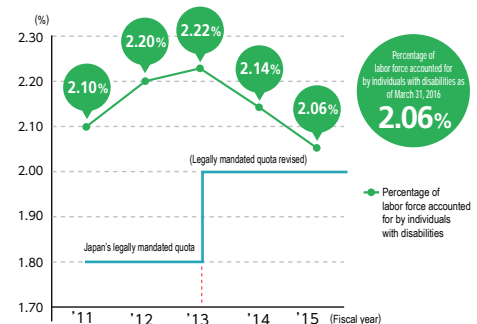
Women with childcare responsibilities are expected to perform at the same level as other employees despite significant constraints, necessitating both alternative approaches and considerable extra effort. For many, a shortage of role models in the workplace limits their ability to seek appropriate advice. DIC recently established the C<sup>3</sup> Advisor System, appointing 12 female employees with experience in handling the demands of career and childcare to advise and counsel their juniors. C<sup>3</sup> advisors are available to all eligible female employees, regardless of geographic location or job classification. ("C<sup>3</sup>" represents "child," "care" and "career.")

Meeting of C<sup>3</sup> advisors

## 3 Advancing the Employment of Individuals with Disabilities

DIC is committed to creating inclusive work environments that help individuals with disabilities enjoy active and fulfilling careers. As of March 31, 2016, individuals with disabilities accounted for 2.1% of DIC's total labor force, exceeding Japan's legally mandated quota of 2.0%. Going forward, DIC will continue striving to enhance work environments and increase workplace accessibility with the aim of lifting this figure to 2.2% by fiscal year 2018.

## Percentage of DIC's Labor Force Accounted for by Individuals with Disabilities



## 4 Reemployment after Retirement and Support for Retirement Planning

DIC has deployed a system that facilitates the reemployment until age 65 of individuals reaching the retirement age of 60 and wishing to remain with the organization. With available options including full-time work, short-time work and work sharing, this system enables reemployed individuals to maximize their experience and make full use of their accumulated technological capabilities and specialized expertise, thereby contributing to sustainable growth for the DIC Group and the training of subsequent generations.

## Number of Reemployed Individuals

	Fiscal year 2013	Fiscal year 2014	Fiscal year 2015
Number of retirees (A)	24	39	126
Individuals seeking reemployment	16	28	104
Number of individuals reemployed (B)	16	27	97
Reemployment rate (B) / (A)	66.7%	69.2%	77.0%

DIC also offers classes for employees within a year of retirement that helps them prepare for retirement. These classes provide assistance with retirement planning, education regarding the national pension system and retirement lifestyle simulations.

## Initiatives that Support a Healthy Work–Life Balance

DIC views work–life balance as essential to both self-realization and sustainable corporate growth. Accordingly, the Company encourages employees to seek both a satisfying work life and a fulfilling life outside work, creating a positive cycle that yields value-added results. DIC strives to encourage work–life balance by creating positive, supportive workplaces, notably by enhancing programs that enable people to balance the demands of work with private commitments such as caring for children or family members who are ill. The Company has also deployed systems that enable employees to restrict the distance they can be transferred, reduce overtime hours, encourage the taking of annual paid leave and promote health management.

## 1 Enhancing Programs that Help Employees Balance the Demands of Work and Home

In 1986, DIC blazed a trail for chemicals manufacturers in Japan by implementing a childcare leave program. Having established work and childcare balance support programs that exceed legal requirements in 2007, the Company continues promoting measures that make it easier for employees to make use thereof. In 2008, the Company acquired the Kurumin Mark, which recognizes companies that promote initiatives designed to assist employees in raising children. DIC has also deployed systems that enable employees to restrict the distance they can be transferred, reduce overtime hours, encourage the taking of annual paid leave and promote health management. Looking ahead, the Company will examine effective measures in response to amendments to the Act on the Welfare of Workers Who Take Care of Children or Other Family Members Including Child Care and Family Care Leave, planned for in 2017, to prevent employee turnover attributable to the need to care for children or elderly family members.

## Work and Childcare Balance Support Programs

Childcare Leave Program	The maximum length of leave is until the child reaches the age of 2 years and 6 months, which is one year longer than the legally mandated leave period.
Leave to Assist with Parenting Program	Male employees can take five days' paid leave during the eight weeks following their child's birth to assist with parenting.
Childcare While Working Program	Employees can shorten their workday by up to three hours until the end of a child's third year of elementary school. Employees can also stagger their working hours to accommodate childcare schedules.
Economic support system	This system enables employees on unpaid childcare leave to borrow a portion of their bonuses in advance to pay for, among others, fertility treatment or infant care facility fees.
Return to previous (or equivalent) position	Employees returning from childcare leave must be allowed to return to their previous position or to a position equivalent thereto.
Information sharing to promote program participation	DIC's views on support for work and childcare balance, as well as a guide to its various available systems and how to make use of them, are posted on the Company's website and intranet.
Nursing care leave system	Employees can take such leave for up to one year, exceeding the statutory maximum of 93 days.
Nursing Care While Working Program	Employees not wishing to take leave while providing nursing care can shorten their workday by up to two hours or opt for a system in which they shorten their days by two hours before or after prescribed working hours.
Relocation limitation system	Management-level employees may limit the locations to which they will accept transfers that involve relocating because of childbirth, childcare, nursing care or other responsibilities.

## Kurumin Mark Certification

In 2008, DIC was accorded the Kurumin Mark, which recognizes companies that actively promote initiatives that assist with child rearing, by Japan's Ministry of Health, Labour and Welfare.



## Number of Employees Using the Childcare Leave and Leave to Assist with Parenting Programs

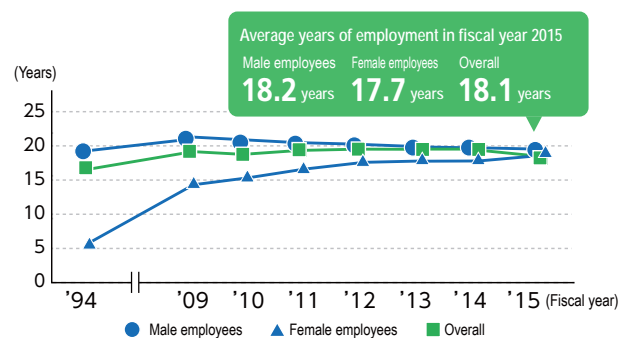
	Fiscal year 2013	Fiscal year 2014	Fiscal year 2015
Number of employees using the Childcare Leave Program	21	28	29
Number of employees using the Leave to Assist with Parenting Program	43	63	64

Note: Figures for fiscal year 2013 are for an irregular transitional nine-month period (April–December 2013).

Thanks to the introduction of various systems and the creation of an environment that encourages employees to make use thereof, the percentage of DIC employees who returned after taking leave is currently 100%. In addition, awareness of the Company's Leave to Assist with Parenting Program among male employees has risen, underscored by the fact that more than 55% of eligible employees took leave to assist with parenting in fiscal years 2014 and 2015.

## 2 Reducing Extreme Overwork and Encouraging Employees to Take Annual Paid Leave

DIC has deployed an electronic system to manage on-site hours, working hours and approved overtime hours. As a measure to prevent extreme overtime, if an employee exceeds the overtime limit agreed to with the employees' union, his or her supervisor is required to submit a report to management confirming the work and reasons for the long hours while also presenting specific measures to ameliorate the situation. This report is also shared with the union. DIC encourages employees to take annual paid leave, notably by recommending leave timing at each business site and having employees plan dates for such leave.

Average Years of Employment  
(Including Individuals Seconded to Group Companies)

## Average Monthly Overtime Hours Worked and Annual Paid Leave Taken

	Fiscal year 2013	Fiscal year 2014	Fiscal year 2015
Average monthly overtime hours worked per employee	12.3 hours	12.3 hours	12.1 hours
Average annual paid leave granted	19.1 days	19.1 days	18.8 days
Average annual paid leave used	10.4 days	11.0 days	11.2 days
Usage rate for annual paid leave	54.5 %	57.6 %	59.6 %

## Caring for Mental Health

DIC takes steps to create environments in which employees can feel secure and works to ensure that its labor management practices comply with legal requirements. The Company places a particularly high priority on caring for psychological and emotional well-being and has established a comprehensive mental health program, engaging an in-house occupational psychologist, encouraging awareness as a way of warding off mental health problems and providing support to ensure a smooth return to work for employees taking leave. DIC has also offered voluntary stress checks since fiscal year 2013. Looking ahead, the Company will continue to promote active, systematic efforts with the goal of preventing mental health disorders in accordance with related legislation passed in Japan in fiscal year 2016.

### Mental Health Initiatives

- Guidance from an in-house occupational psychologist (engaged as an occupational physician since fiscal year 2012)
- Internal help desk
- Line care training\* for supervisors
- Mental health self-checks
- *Kokoro no Kenko* ("Psychological Health") self-check handbook distributed to all employees
- Flexible process to support employees returning to work after taking leave



*Kokoro no Kenko* ("Psychological Health") handbook

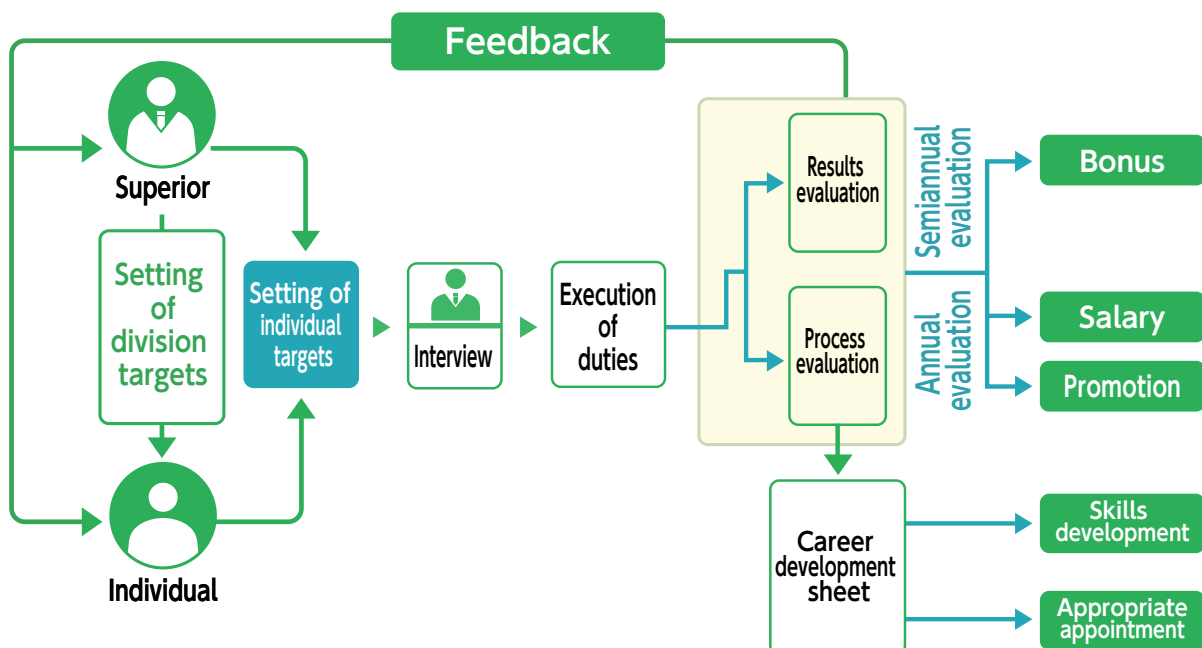
\* Line-care training: Training for supervisors to help them recognize promptly when an employee is unwell and respond appropriately by, for example, recommending guidance or counseling or making workplace improvements.

## Securing and Fostering Human Resources

### 1 Ability-Oriented Qualification System and Fair and Impartial Treatment

To ensure that the efforts and achievements of all employees are reflected appropriately in their treatment, DIC has consolidated its numerous employee qualification systems irrespective of job classification and educational credentials. The selection of employees to recommend for qualification is done through screening based on objective standards, thereby guaranteeing equal opportunities for promotion to all motivated, capable employees. Remuneration and personnel evaluation systems designed to enhance job satisfaction ensure that abilities and achievements are assessed appropriately and reflected in a timely manner in their treatment. Of note, DIC has introduced MBO into its personnel evaluation system, a goal-setting management tool that promotes both corporate growth and employee development. Results of individual evaluations are fed back in full to employees, including reasoning behind determinations—a transparent process that ensures employees are largely satisfied with evaluation results.

#### DIC's Personnel Evaluation System



## 2 Fostering Human Resources to Reinforce Front-Line Capabilities and Accelerate Change

Having recognized fortifying its Group organizational capabilities and enhancing the skills of its people as important challenges, DIC has declared the medium-term focus of its human resources development program as being to foster human resources capable of reinforcing front-line capabilities and accelerating change. DIC's training system comprises programs in six categories. These programs are based on curricula that emphasize a systematic approach to helping each employee acquire critical skills. In fiscal year 2016, training emphasizes the concepts of "global" and "diversity," with training to improve English-language skills expanded and Japanese-language training for non-native speakers and entry-level education for mid-career hires added.

### Medium-Term Focus of DIC's Human Resources Development Program: Foster human resources capable of reinforcing front-line capabilities and accelerating change



### DIC Training Programs

Management-level training	Promote globalization, strengthen/foster the ability of management-level employees to deal with risks	DIC Management School, media training
Global human resources development	Systematic efforts to foster managers and employees of overseas Group companies, enhance the skills of Japanese employees assigned to overseas posts, improve the Japanese-language abilities of employees who are not native speakers	Global Management (preparatory training for employees assigned to overseas posts), Global Challenge Program, Target Global Program (training to enhance English-language communication skills), Effective E-Mailing (training in how to compose e-mails in English), Japanese-language training for employees who are not native speakers
Level-specific training	Education and training to equip employees with the skills to fulfill responsibilities at each level	Qualification-specific training (J, M, S, senior); training tailored to different management ranks
Department- and job-specific training	Education and training to enhance capabilities required by different departments and jobs	Human resources development programs tailored to production departments (Kaizen Skill Improvement Training Program, others), technical departments (training to support the ability to propose R&D themes, others), sales departments (training to cultivate proposal development capabilities, others) and support departments ("why-why analysis" training, others)
On-the-job training	Hands-on training in the workplace to foster employees and cultivate skills	Workplace-specific on-the-job training, domestic technical department trainee program, Overseas Trainee Program, Reverse Trainee Program
Self development	Support for employees seeking to enhance their skills	Correspondence courses, e-learning courses, in-house seminar courses, Skype-based English conversation courses, preparatory courses for the TOEIC Institutional Program (IP) Test

## VOICE from the DIC Group

### There is more to English than speaking, listening comprehension and reading!

My job involves a fair amount of business travel overseas, so I took the Target Global Program, the goal of which is to enhance English-language communications skills. I think that people are inclined to think that English speaking, listening comprehension and reading abilities are all you need to do business overseas. This program, which focused on assertiveness, negotiating techniques and how to conduct meetings to motivate people to generate ideas and reach conclusions, taught me what is really important. Training sessions were conducted entirely in English, but the relevance of what I learned is certainly not limited to the English-speaking world. I am confident that these skills will stand me in good stead and I look forward to applying them in the field.

Functional Coatings Sales Department, Liquid Compounds Product Division **Masayuki Aota**



## TOPIC

### On-the-Job Training

The goal of DIC's Overseas Trainee Program, one of its key on-the-job training programs, is to foster global human resources by dispatching selected employees to work at a DIC Group company in another country for a specified period, thereby helping them develop a more international mindset, improve their skills and build networks with their colleagues overseas. Under the Reverse Trainee Program, DIC Group companies in Japan welcome employees from overseas Group companies, giving them a chance to deepen their understanding of Japanese culture, commercial practices and business manners. This program also contributes to the globalization of Japanese Group companies and encourages smooth cooperation with overseas Group companies.

#### Overseas Trainee Program Destinations and Number of Employees Dispatched in Fiscal Year 2015

Malaysia	2
Vietnam	1
United States	2
India	1
Thailand	1
Indonesia	1
United Kingdom	1
PRC	1

## VOICE from the DIC Group

### Being an overseas trainee gave me a chance to reflect on myself.

As a participant in the Overseas Trainee Program, in 2015 I was sent to work at DIC (Malaysia) Sdn. Bhd. While I found the language barrier and the cultural and religious differences challenging, I really enjoyed building personal relationships and working together with my new colleagues. Being in Malaysia and having the opportunity to be involved in global operations both changed my worldview and gave me a better overview of the DIC Group. It is a bit embarrassing to say so, but I think the experience helped me to mature as a person. I have since applied for an overseas posting and am working to improve my English.

Sales Department 3, DIC Graphics Corporation **Takuya Morishita**



# Expanding Sustainable Procurement Worldwide

**Goals and Achievements of Major Initiatives** Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objectives of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Promote CSR procurement.	<ul style="list-style-type: none"> <li>Hold briefings on CSR procurement assessments at DIC Group companies in Greater China and Japan.</li> <li>Link Sun Chemical Group and DIC Group CSR procurement efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Briefings were held at DIC Group companies in Greater China using the <i>DIC Group Supply-chain CSR Deployment Guidebook</i>.</li> <li>Sun Chemical conducted assessments of 160 Sun Chemical Group companies in North America and Europe.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Continue to work with suppliers to reduce risks in key businesses associated with CSR procurement.</li> <li>Promote the sharing of CSR procurement assessment results and challenges for suppliers used by both DIC and Sun Chemical.</li> </ul>
	<ul style="list-style-type: none"> <li>Continue to conduct CSR procurement assessments for suppliers in line with version 2 of the <i>DIC Group Supply-chain CSR Deployment Guidebook</i>. Provide feedback to all suppliers assessed.</li> <li>Continue on-site inquiries for certain suppliers.</li> </ul>	<ul style="list-style-type: none"> <li>CSR procurement assessments were conducted for suppliers in line with version 2 of the <i>DIC Group Supply-chain CSR Deployment Guidebook</i>, bringing the cumulative number of suppliers assessed to date to 566. Feedback was provided to all suppliers assessed.</li> <li>On-site inquiries were conducted for three suppliers, bringing the cumulative number of companies for which on-site inquiries have been conducted to 45.</li> </ul>	★★	<ul style="list-style-type: none"> <li>Continue to conduct CSR procurement assessments for new suppliers and existing suppliers for whom assessments have not yet been completed.</li> <li>Promote CSR procurement assessments for DIC Group company suppliers in Greater China and the Asia-Pacific region.</li> </ul>

## Basic Approach to Sustainable Procurement

With the aim of ensuring its extended supply chain functions in a socially responsible manner, the DIC Group established the DIC Group Universal Purchasing Policy in 2008, based on which it also formulated purchasing management regulations, thereby creating a configuration for sustainable procurement. In 2009, the Group formulated the DIC Group CSR Procurement Guidelines, which clarify issues it expects suppliers to address. The Group promotes CSR procurement across its supply chain by ensuring that all suppliers understand guidelines and implement improvements and initiatives necessary to ensure the sustainability of Group procurement. The DIC Group has operations in Japan, the Americas and Europe, Greater China and the Asia-Pacific region. Group companies in different regions collaborate to share information and liaise with suppliers on a global basis to facilitate the preferential procurement of critical raw materials.

### The DIC Group Universal Purchasing Policy

Guided by an action policy established to realize the DIC Group's basic sustainable procurement principles, the Purchasing Department adheres to the following guidelines in dealing with suppliers:

**1 Fair and transparent business practices**

The DIC Group will implement fair and open purchasing activities with suppliers based on global perspectives, without the constraints of conventional commercial customs.

**2 An appropriate purchasing process and building of relationships of mutual trust**

The DIC Group, as a good partner for suppliers, will build long-lasting, mutually trusted relationships with suppliers and work together with them for mutual harmony and benefit, while complying with relevant regulations/social norms, domestic and overseas, and pursuing adequate quality and prices.

**3 Satisfying environmental/safety needs**

The DIC Group will take responsibility as an exemplary corporate citizen for environmental affairs, occupational safety, human health and product quality, always take into account changes in society and implement environment-friendly purchasing activities.

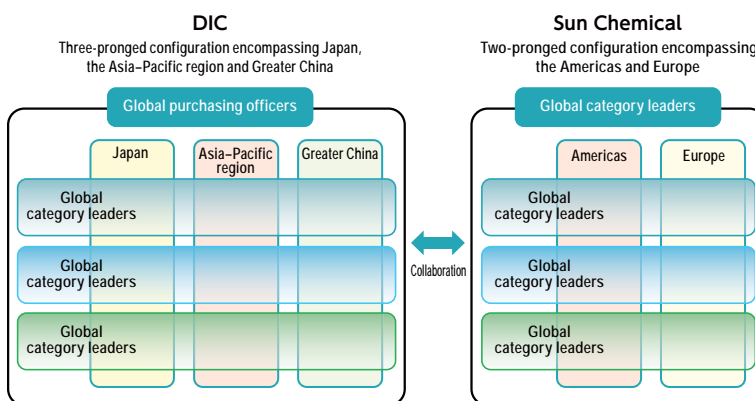
**4 Challenging to the creation of a new value**

In order to respond at a high level to a new value sought by society, the DIC Group will proactively challenge the creation of such value together with suppliers, with whom the same goal can be shared, and strive to grow together with them in a sustainable manner.

## Global Procurement Initiatives

The DIC Group continues to leverage collaboration among Group companies in Japan, the Asia-Pacific region, Greater China and the Americas and Europe with the goal of creating an optimal global supply chain, thus ensuring that its procurement practices are safe, reliable and worthy of its customers' trust.

### The DIC Group's Global Purchasing Configurations



## Promoting CSR Procurement

Based on the DIC Group Universal Purchasing Policy, and incorporating requirements contained in guidebooks put out by external organizations including the Japan Electronics and Information Technology Industries Association (JEITA), DIC formulated the DIC Group CSR Procurement Guidelines, a series of requirements pertaining to ESG-related imperatives, including the management of chemical substances in and reduction of the environmental impact of raw materials. With the aim of compelling suppliers to observe these guidelines, the Group conducts assessments and on-site inquiries in accordance with the *DIC Group Supply-chain CSR Deployment Guidebook*.

### The DIC Group CSR Procurement Guidelines

- 1 Compliance with laws and social norms
- 2 Respect for human rights and consideration for work environments
- 3 Safety and hygiene
- 4 Promotion of sound business management
- 5 Consideration for the environment
- 6 Information security
- 7 Appropriate quality and safety and improved technologies
- 8 Flexible attitude to ensure stable supplies and respond to change
- 9 Contribution to local communities and society
- 10 Promoting CSR and deploying it in the supply chain

## Self-Evaluations

In accordance with version 2\* of the *DIC Group Supply-chain CSR Deployment Guidebook*, the DIC Group asks suppliers to complete a questionnaire, which it uses to ascertain the status of suppliers' CSR procurement practices. The questionnaire further segments the Group's 10 procurement guidelines into 46 issues.

\* Version 1 of the *DIC Group Supply-chain CSR Deployment Guidebook* was published in 2009 in Japanese, English and Chinese. Version 2, published in July 2013, includes new sections on conflict minerals and biodiversity, added in response to changing social imperatives.

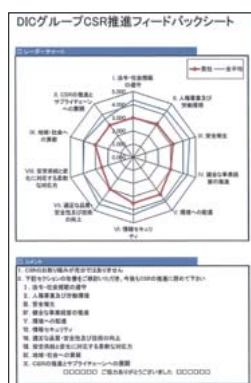
## Analyzing the Results of Questionnaires

From November 2013 through December 2015, the DIC Group conducted assessments for 566 suppliers using version 2 of the *DIC Group Supply-chain CSR Deployment Guidebook*, accounting for approximately 90% of its procurement spending. The Group analyzed and assessed questionnaire responses and provided feedback to all 566 companies, along with requests for corrective measures should significant issues be discovered. The DIC Group also conducted on-site inquiries for 45 suppliers between fiscal years 2011 and 2015.

Cumulative number of suppliers assessed (November 2013–December 2015)

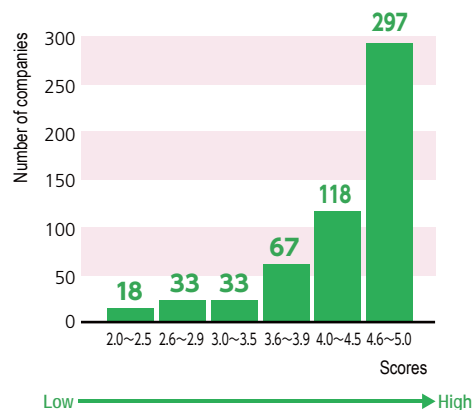
**566** Feedback provided

Equivalent to 90%-plus of procurement spending



Feedback sheet

### Assessment Distribution Chart (566 Companies)



Note: Based on DIC's analysis of questionnaire responses, 91% of suppliers assessed to date scored 3.0 or higher on the Group's 5.0-point scale.

## Conducting On-Site Inquiries to Advance CSR

From fiscal year 2011 through fiscal year 2015, the DIC Group conducted on-site inquiries for 45 suppliers with the objective of helping them further their understanding of CSR. In an on-site inquiry, the Group and the supplier confirm the responses provided by the supplier in the assessment questionnaire and exchange views, a process through which the Group aims to eliminate gaps between its assessment and that of the supplier. If significant problems are found to exist, the Group may ask suppliers to take corrective action and present examples of Group CSR initiatives with the goal of making this a beneficial experience for both parties.

## Global Procurement Initiatives

In fiscal year 2015, DIC and regional headquarters in the PRC and the Asia–Pacific region collaborated to promote cooperation in both overall sustainability and CSR procurement at principal Group companies in the two regions. Subsequently, the Group conducted assessments of 70 suppliers in Greater China (including Taiwan). As of December 31, 2015, 51 of these companies had submitted completed questionnaires and received feedback. DIC also collaborated with the Sun Chemical Group, which functions as the DIC Group's regional headquarters for the Americas and Europe, to promote awareness of CSR procurement by conducting assessments of 160 key suppliers in these two regions.



Presentation for purchasing officers in the Asia–Pacific region

## Conflict Minerals

In July 2010, the Dodd–Frank Wall Street Reform and Consumer Protection Act, which contains a provision requiring companies to report on their use of conflict minerals, was signed into law in the United States. The DIC Group recognizes the importance of addressing the issue of conflict minerals. As stated in its Basic Policy concerning Conflict Minerals, presented on its global website, the DIC Group refrains from using gold, tantalum, tungsten and tin, which are classified as conflict minerals, that is, minerals mined in conditions of armed conflict and abuse in the Democratic Republic of the Congo and its neighboring countries. Moreover, should any raw materials purchased from third-party suppliers be found to contain conflict minerals, the DIC Group will immediately terminate procurement thereof. The DIC Group is using the Conflict Mineral Reporting Template, created by the Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI), to conduct conflict minerals audits across its entire supply chain, an ongoing effort. As of December 2015, the Group had received responses for more than 90% of the items currently procured by Group purchasing departments.

## VOICE from the DIC Group

### We are promoting CSR procurement by conducting on-site inquiries for major suppliers.

I currently work in the Purchasing Department in the area of raw materials procurement. With the aim of realizing sustainable procurement, we periodically conduct on-site inquiries for suppliers of principal raw materials. Actually going to the supplier gives one a much clearer idea of the supplier's initiatives than can be gained simply by reading questionnaire responses. One company I visited was taking steps to illuminate legal and regulatory risks and had established study groups to explore issues related to compliance and the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, allowing me to see firsthand the importance the company placed on compliance initiatives. I also inspected the company's production facilities, giving me the opportunity to observe its stringent process control systems and BCP measures, including dividing production among multiple facilities. This process enabled us to deepen our relationship with this particular supplier.

Assistant Manager, Purchasing Department **Miho Hayashi**







# Establishing Solutions-Oriented Businesses

Goals and Achievements of Major Initiatives Evaluations are based on self-evaluations of current progress. Key: ★★★ = Excellent; ★★ = Satisfactory; ★ = Still needs work

Objective of initiatives	Goals for fiscal year 2015	Achievements in fiscal year 2015	Evaluation	Goals for fiscal year 2016
Propose solutions-oriented businesses that respond to social imperatives.	<b>Cultivate solutions-oriented businesses</b> Anticipate new social needs arising from global megatrends and plan new businesses that provide solutions to those needs.	Having recognized the promise of heat management, including the use of waste heat and thermal storage, the DIC Group identified a number of promising markets. In the area of adhesives for damp surfaces, the Group cultivated new customers in the PRC and has had its technologies certified.	★★	With the aim of creating next-generation businesses, enter new markets and promote the development of products that integrate multiple technologies to propose solutions that capitalize on the Group's supply chain.
	<b>Strengthen the DIC brand</b> Make use of product guidebooks, exhibitions and other communications tools and opportunities to promote awareness of the DIC brand.	The DIC Group participated in a number of major trade shows in Japan and overseas, including Converttech Japan 2015, the 2015 China Information Technology Expo (CITE 2015) in the PRC and Touch Taiwan 2015. The Group also staged private exhibitions for four domestic customer companies in Japan.	★★★	Participate in trade shows for key customer industries in Japan and overseas to strengthen the DIC brand. (Examples: FINETECH JAPAN and Tokyo Pack)

## Capitalizing on the Changing Needs of Society

The DIC way of doing business starts with listening to what its customers say. DIC's approach is to swiftly grasp the concerns of its customers to gain insights into emerging social needs and offer appropriate solutions. While the starting point is the voice of its customers—an approach known as “customer-in”—the Group also takes a “market-in” approach, paying heed to issues of global significance, such as global warming, with the aim of predicting trends and anticipating the future needs of society.

## Promoting Business Activities with Roots in Issues of Concern to Society

The principal factor behind efforts to advance the of electric vehicles (EVs) is the need crucial issues such as global warming and fossil fuel depletion. The practicality of EVs will depend on the resolving of a number of key technological challenges. These include increasing the capacity of storage batteries, reducing the size and weight of powertrains\*1 and improving the durability of fuel cells. The DIC Group continues to promote research aimed at addressing such challenges, and is developing technologies that will yield concrete, viable solutions, including innovative materials that boost battery capacity and improve the performance of power devices\*2 and fuel cells. In the information and communications field, the Group is promoting the development of materials for printed electronics with the aim of providing solutions to needs arising from the growing trend toward wearable\*3 and flexible\*4 devices, which reflects the increased sophistication of information networks. In addition to automobiles, information and communications and other fields that necessitate advanced technologies, the Group is responding to social imperatives in such areas as packaging, graphics and the field it has dubbed “life and living,” as well as proposing new businesses with the purpose of further evolving its business model.

\*1 In a motor vehicle, the powertrain is the group of components that transform stored energy into kinetic energy for the purpose of propulsion.  
 \*2 A power device is a semiconductor used as a switch or rectifier in power electronics.  
 \*3 Wearable devices are incorporated into accessories such as watches and glasses and worn on the body rather than carried like traditional mobile devices such as smartphones and tablet computers.  
 \*4 Flexible devices are bendable, rollable and more durable than conventional devices made with glass or other stiff, breakable materials.

## Enhancing Brand Strength

Established as a printing inks manufacturer, DIC has expanded its business by leveraging its capabilities in organic pigments, synthetic resins and fine chemicals, capitalizing on its wealth of elemental technologies to develop a diverse portfolio of innovative products. To encourage broader customer awareness of its distinctive products and technologies, DIC publishes and distributes market-oriented product guidebooks. DIC also strives to enhance its brand strength through participation in trade shows both in Japan and overseas, which in fiscal year 2015 included FINETECH JAPAN, Tokyo Pack and Touch Taiwan 2015. The Group also organizes private exhibitions for customers on an individual basis.



The DIC Group's booth at FINETECH JAPAN

## Identifying and Fostering Promising Markets Based on Projections Needs and Future Trends

With the aim of realizing sustainable growth over the medium to long term, DIC has identified promising new markets arising from social imperatives in six key areas—resources, materials and energy; logistics and industrial equipment; electronic and electrical equipment; pharmaceuticals and medical devices; general consumer products; and construction infrastructure—and is striving to evaluate the possibility of cultivating demand in each. The Group is also working to identify key technologies, as well as to discern technological issues that must be addressed, allowing it to accurately gauge growth and technology development potential and determine which of these markets offer promise and which it will enter.

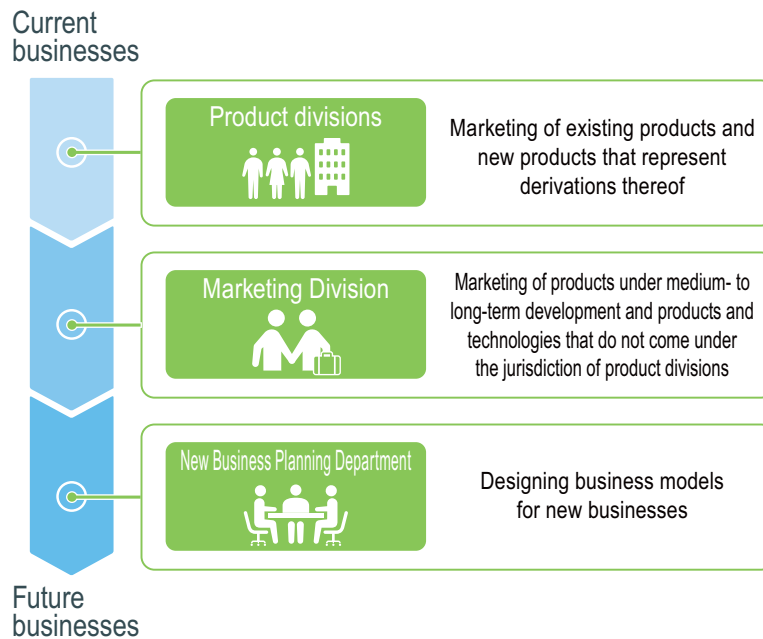
## Global Efforts to Expand Business Domains and Cultivate Next-Generation Businesses

Once it has resolved provisionally to enter a promising new market, the DIC Group sets about clarifying necessary technologies, systems and services, as well as key development themes. Engineering and sales departments work together to verify theoretical value and ascertain the appropriate opportunity to enter the market and, bearing in mind its position in the supply chain, to create an optimal business model that will enable it to provide innovative solutions and build a robust business.

## Leveraging a New Corporate Organization

With the objective of enhancing customer convenience and emphasizing its comprehensive product and technological capabilities, in fiscal year 2016 DIC adopted a new corporate organization that incorporates the best features of its previous matrix-like organization while clarifying the responsibilities of individual departments and enhancing speed, thus helps to maximize synergies among Group companies, as well as to reinforce collaboration.

As part of this reorganization, DIC established a Marketing Division and a New Business Planning Department. The Marketing Division oversees two activities: market-focused cross-portfolio strategies and marketing of products requiring a medium- to long-term commitment before they contribute to business growth, as well as marketing of products and technologies that do not come under the jurisdiction of existing product divisions. The New Business Planning Department is charged with designing new business models for new businesses.



## VOICE from the DIC Group

### Our goal is to promote multifaceted marketing with an emphasis on enhancing our value chain.

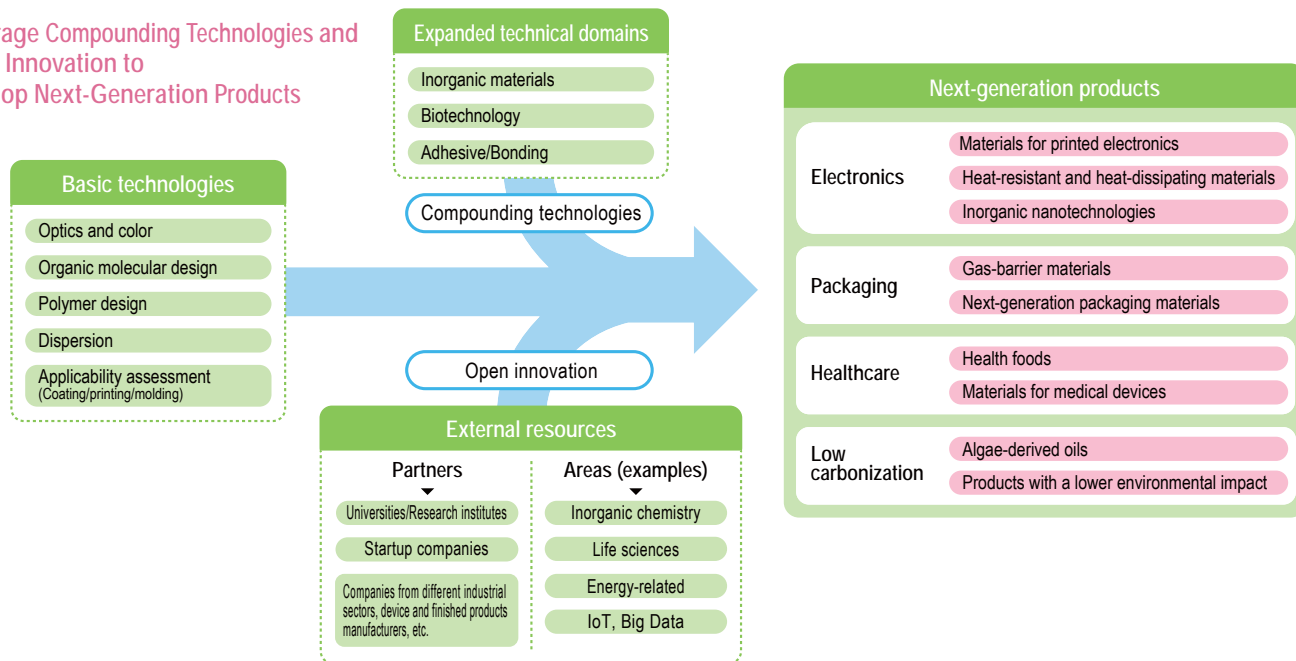
In fiscal year 2016, the Corporate Marketing Department and the three marketing departments attached to the sales administrative divisions were combined to create the new Marketing Division. Our focus is on three areas, which we have dubbed "industrial materials," "life and infrastructure" and "packaging businesses." Our core activities emphasize two perspectives, namely, DIC Group products and customers/regions. With the goal of helping expand the Group's operating foundation and contributing to consolidated net sales, we promote multifaceted marketing with an emphasis on enhancing our value chain through efforts to respond to short- to medium-term shifts in needs of customers and markets and medium- and long-term changes in social structure. I am in charge of marketing in the area of packaging businesses, which involves promoting the expansion of sales of oxygen- and vapor-barrier adhesives, laminating adhesive and other high-performance materials in global markets. My team also works to cultivate new markets and accelerate R&D in line with next-generation themes by collaborating with the Sun Chemical Group to reinforce global marketing. In particular, we are stepping up efforts to promote the cultivation of new markets by offering materials with barrier properties, migration solutions and other products that respond to concerns relating to, for example, safety and security, as well as the environment. These efforts give us a broad overview of our value chain, positioning us to develop competitive solutions.

In charge of marketing for packaging businesses, Marketing Division **Saki Urakami**





## Leverage Compounding Technologies and Open Innovation to Develop Next-Generation Products



## Specific Initiatives and Achievements

The DIC Group is encouraging a shift toward materials with a reduced environmental impact—notably water-based and solvent-free materials—and is advancing the development of environment-friendly products for use in displays and packaging, as well as for infrastructure-related applications, that help improve the environmental performance of the finished products in which they are used.

### Products for Use in Electronics Equipment

In the area of products for LCDs, the DIC Group developed and commenced full-scale production of a new green pigment for wide-color gamut color filters. The Group also developed and launched n-type LC materials for fringe field switching (FFS) mode, which boast a high light transmittance rate, for use in LCDs for smartphones and other mobile devices.

Newly developed electronics materials include an innovative epoxy curing agent that combines low-dielectric properties and a high glass transition temperature for use in circuit boards for communications infrastructure applications, a cutting-edge highly heat-resistant novolac resin designed for use as a solder resist in semiconductor fabrication and a fluorosurfactant that combines outstanding leveling properties and recoatability in thin-film coatings for use as a photoresist leveling agent. The Group also expanded its range of environment-friendly nonhalogenated epoxy resins for use as semiconductor encapsulation materials by adding new grades, while sales of these resins for circuit board-related applications, which demand low-dielectric properties, progressed steadily.

### Products for Packaging Applications

New DIC products released in fiscal year 2015 included an offset ink that dries at low temperatures, facilitating a reduction in energy costs, a high-sensitivity UV-curable ink\*<sup>1</sup> that uses an innovative resin and a sheetfed ink containing an anti-setoff agent, eliminating the need to use a spray powder to prevent ink set-off, that is, the unwanted transfer of ink from a printed sheet to the back of the next sheet in the stack. Overseas, the Sun Chemical Group introduced a new water-based flexo ink that does not contain bisphenol A (BPA), to address growing consumer concerns regarding potential health risks. In the area of energy-cured flexo inks, the Sun Chemical Group developed a base ink system that responds to the needs of manufacturers of food packaging materials for low-migration inks\*<sup>2</sup>.

Newly developed products in the area of adhesives for flexible packaging included a vapor-deposited reinforcing adhesive that improves the barrier properties of laminated packaging films when used with aluminum vapor-deposited film layers; an ether-based adhesive, only a small amount of which needs to be applied to laminated layers to achieve a superior surface finish; and a high-solid adhesive\*<sup>3</sup> that delivers exceptional resistance to the impact of package contents.

\*<sup>1</sup> High-sensitivity UV-curable inks: Inks that can be cured (dried) with an LED or other low-energy UV light-emitting lamp.

\*<sup>2</sup> Low-migration inks: These are inks the low molecular components of which do not migrate from the packaging substrate and contaminate the food product inside. Low-migration inks qualify as Food Contact Materials (FCMs).

\*<sup>3</sup> High-solid adhesives: Environment-friendly adhesives that use a reduced volume of organic solvent in laminate processing.

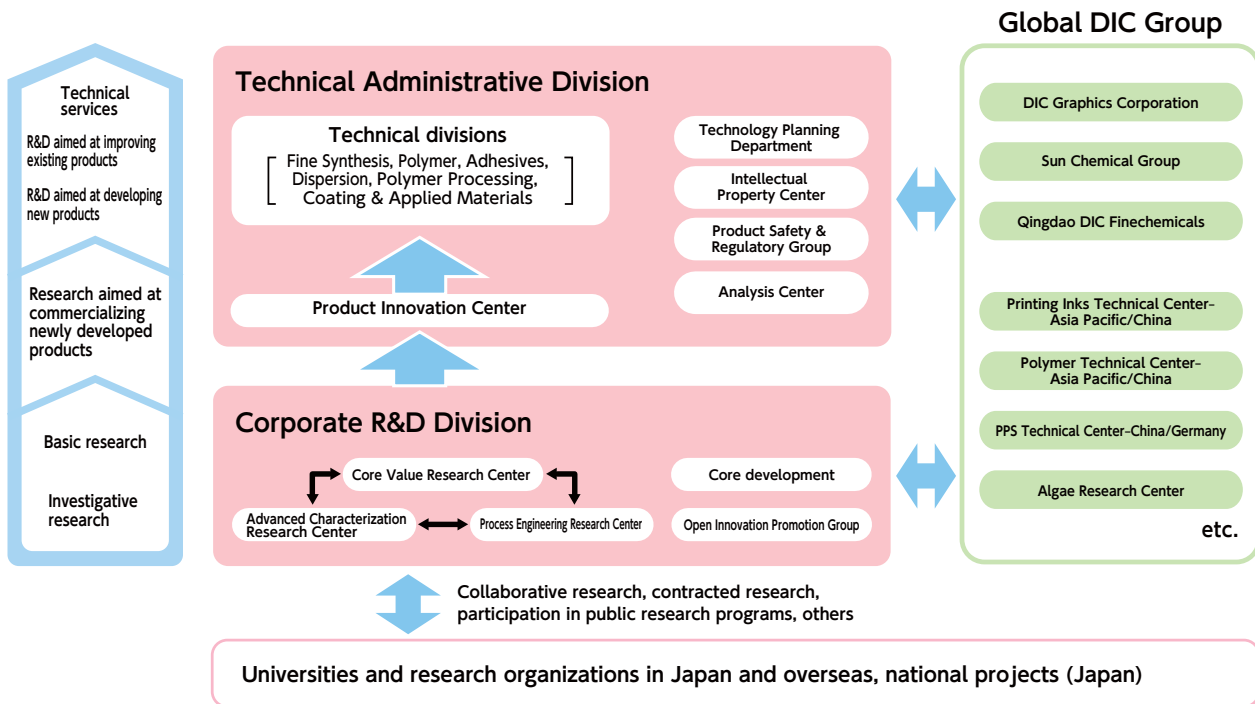
### Products for Automotive Applications

In the area of industrial-use adhesive tapes, the DIC Group made solid progress in the development of double-coated tapes incorporating high-performance waterborne adhesives for automotive interiors that addresses needs for lower VOC content and a reduced odor. In PPS polymers, the Group continued to promote the incremental expansion of its production capacity, completing the first stage of this effort, which centered on process development. Another focus was the development of groundbreaking proprietary production processes with the aim of reducing associated costs.

## A Global Framework for Product Development

To maximize global R&D resources, DIC's Technical Administrative Division and Corporate R&D Division cooperate with the R&D components of DIC Group companies around the world, including DIC Graphics Corporation; the Sun Chemical Group's research centers in the United States, the United Kingdom and Germany; and the Qingdao DIC Finechemicals Co., Ltd. in the PRC. In fiscal year 2014, the Group established two printing inks technical centers, one in Thailand for the Asia-Pacific region and one in the PRC, as well as a PPS technical service center in the PRC and Germany. In the United States, a new algae research center was opened that will capitalize on the Group's accumulated expertise in the cultivation and use of Spirulina to conduct comprehensive algae-related research in areas ranging from cultivation to practical application.

### The DIC Group's R&D Configuration



## Promoting Environment-Friendly Products

Conscious always of the importance of ensuring its products are environment-friendly, DIC promotes the development of products and new technologies that are useful to society and works to increase the weighting of environment-friendly products in its portfolio, by reducing the volume of hazardous substances it uses, focusing on products that are less hazardous and products that facilitate recycling, and realizing safer production processes that generate less waste and use less energy. DIC also conducts environmental assessments on a continuous basis and strives to maintain a solid grasp of laws and regulations in different countries and territories and of trends in environmental measures, thereby ensuring its ongoing ability to engineer products that comply with diverse regulations governing the use of chemical substances in different markets. In fiscal year 2015, environment-friendly products accounted for 53% of all products put out by DIC and subsidiary DIC Graphics.

### Evaluation Sheet for Environment-Friendly Products

Department:		Prepared by:		Prepared on:	
Product to be Evaluated:					
Evaluation Item	Certifying Standards	Description	Average of f	Coefficient α	Subtotal α-f
Energy Consumption	Reduction of energy in production, transportation, etc.				
Materials to be Used	Reduction of use of non-renewable materials, non-recyclable materials, etc.				
Hazards	Product with lower toxicity, etc.				
Amount of Waste Generated	Reduction of environmentally concerned substances, etc.				
Remarks:					
			Evaluator		

DIC introduced its system for designating environment-friendly products in 2003 and uses a proprietary evaluation sheet to designate products as "environment-friendly."

## Protecting Intellectual Property

Recognizing intellectual property as crucial to competitiveness, the DIC Group vows to respect the intellectual property of other companies. At the same time, guided by an open/closed strategy the Group works to secure intellectual property rights for its own technologies and keep them in a “black box.”

In fiscal year 2015, DIC was fourth in a ranking of companies in the chemicals industry in Japan in terms of patent assets owned in a review conducted by an independent firm\*. DIC registers an average of 400 new patents annually. While this is small compared to leading chemicals firms, the Company scored high for its overall scale of its patent assets, underscoring the quality and high profile of the patents it holds. DIC will continue to actively protect its intellectual property portfolio with the aim of ensuring sustainable growth in the years ahead.

\* Patent Result Co., Ltd.

## VOICE from the DIC Group

### We are developing environment-friendly packaging materials.

The *PASLIM* series is a selection of adhesives with oxygen-barrier properties that reduce the amount of packaging material waste. In recent years, we have seen an increase in the use of packaging materials comprising multiple layers of packaging film laminated together to package food products with the aim of prolonging shelf life. *PASLIM* was developed as an adhesive that would prevent oxygen permeation. The use of *PASLIM* eliminates the need to use multiple layers, facilitating the production of laminated packaging films that are dramatically thinner and lighter than conventional films but boast excellent oxygen-barrier properties. As well as preventing food deterioration, thinner, lighter films reduce the amount of packaging film used and lower CO<sub>2</sub> emissions attributable to such films. We will continue working to develop environment-friendly packaging materials with the aim of contributing to the realization of a sustainable society.

Head Researcher, Adhesives Technical Group 1, Adhesives Technical Division **Masamitsu Arai**



# Adding Color and Comfort to Lifestyles

## Basic Approach to Social Contribution

Based on its Guidelines for Social Contribution Activities, established in fiscal year 2009, the DIC Group works to ensure harmony with local communities and individuals through activities aimed at building a strong relationship with society.

### The DIC Group's Guidelines for Social Contribution Activities

In line with its Color and Comfort by Chemistry management vision, the DIC Group will promote social contribution initiatives in three areas: business activities, culture and education, and communities and society.

- Business activities** The DIC Group will offer products and services that contribute to the development of a sustainable society and protection of the global environment from the viewpoint of “CSR through business activities.”
- Culture and education** The DIC Group will engage in activities that will contribute to the development and promotion of culture, the arts, science and education, including fostering next-generation human resources in areas such as the culture of color and chemistry.
- Communities and society** The DIC Group will strive to coexist harmoniously with local communities to develop a relationship of mutual trust. Moreover, the Group will provide an environment that enables employees to engage in voluntary contribution activities in their respective local communities.

## Examples of Recent Initiatives

### Publication of the *Guidebook for the Universal Color Design—Recommended Color Set*

The DIC Group is actively involved in R&D in the area of color universal design (CUD), as well as in expanding public awareness and understanding of CUD's importance. In November 2013, the Group—in cooperation with the Japan Paint Manufacturers Association, the Industrial Research Institute of Ishikawa and the Color Universal Design Organization and under the supervision of the University of Tokyo—published the *Guidebook for the Color Universal Design—Recommended Color Set*. In developing this color set, participating organizations capitalized on their particular expertise in color vision characteristics to verify and adjust proposed colors, a process that facilitated the creation of a set of colors that are relatively easy to distinguish regardless of ability to see colors and can be reproduced using printing inks, coatings and digital imaging devices.

At AIC 2015 TOKYO, the midterm meeting of the International Colour Association (ACI), held in May 2015, the DIC Group gave a presentation on collaborative research on CUD and printing inks involving Chiba University, the Central Research Laboratories and DIC Color Design, Inc., and introduced the Color Universal Design—Recommended Color Set.

Research with Chiba University focused on the color appearance of red printing inks, frequently used to print warnings and other important information on packaging for, among others, food products and pharmaceuticals. Researchers created a number of red spot color inks consisting of several base inks and prepared printing samples on various substrates, which they asked colorblind individuals to evaluate for redness and discriminability on a black background under differing illuminance levels. The results of evaluations were announced at AIC 2015 TOKYO. This initiative earned high marks from the color professionals in attendance for its unique approach, which maximizes the DIC Group's position as a printing inks manufacturer. AIC 2015 TOKYO also marked the first time that the Color Universal Design—Recommended Color Set has been introduced at an academic conference. The presentation of examples of the set being used to fine-tune colors drew a positive response, with visitors from abroad commenting that they had never seen a resource that proposed practical color standards overseas.

The DIC Group will continue to promote research initiatives that contribute to society and add color to lifestyles.



*Guidebook for the Color Universal Design—Recommended Color Set*

AIC 2015 TOKYO





## Visiting Science Lab Program

In line with the Japanese government's efforts to promote career education initiatives, as well as to help curb a decline in the popularity of science among children, DIC and DIC Graphics conduct visiting science labs at public elementary schools. Through this program, which focuses on, among others, experiments in pigment synthesis and offset printing, the Group seeks to spark children's interest in science and encourage them to realize the close relationship between science and their everyday lives.

In fiscal year 2015, the DIC Group's visiting science lab program was nominated and won silver in the category of initiatives chosen by elementary school students in the 2015 Education Support Grand Prix (formerly the CSR Initiative Award in Education), sponsored by Tokyo-based Leave a Nest Co., Ltd. At the request of Tokyo University of the Arts and Aichi University of the Arts, the Group also held labs for undergraduate and graduate students at both universities.



Visiting science lab at Tokyo University of the Arts



DIC's 2015 Education Support Grand Prix certificate

### Comment

*Collaboration between industry and academia is crucial to fostering human resources and advancing technology.*

When I heard that DIC conducted visiting science labs at elementary schools on themes related to pigments, I asked the Company whether they would consider modifying lab content to make it suitable for students studying fine arts and conducting visiting labs at Tokyo University of the Arts and Aichi University of the Arts. A knowledge of materials is important to the future of these students, so the purpose of the lab was to promote understanding of the fact that most of the pigments used in modern-day paints are created using the power of science. For students, a visiting science lab conducted by people from a major corporation is a valuable opportunity to obtain a variety of information from a different perspective than that of their usual classes. I am a firm believer that collaboration between industry and academia is crucial to fostering human resources and advancing technology.



Associate Professor, Tokyo University of the Arts **Takayuki Akimoto**

## Initiatives Led by the Central Research Laboratories

The Central Research Laboratories offers a variety of programs in such uniquely DIC topics as synthesis and chromatics to the students of local schools. In September and December 2015, respectively, students from Chiba Prefectural Sakura High School and Seishin Gakuen High School in Ibaraki Prefecture, both of which have earned the designation Super Science High School\*, were invited to the Central Research Laboratories to participate in a lab lesson on the theme of "synthesis and craftsmanship." Led by researchers from the facility, the event—which took place in a research laboratory—included an introduction to research conducted using state-of-the-art analytical equipment, a hands-on lesson on the use of said analytical equipment, a lab in which students experimented with synthesizing organic pigments and a lecture on DIC products, and was designed to help students better understand the concept of craftsmanship as it pertains to science. Lecturers also incorporated a career education component into the event, taking time to talk to interested students about the challenges and rewards of being a researcher.

\* Super Science High School is a designation awarded by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) to senior high schools that implement curricula focused on the sciences and mathematics that goes beyond the Ministry's official guidelines with the aim of fostering the next generation of talented engineers and scientists.



Lab lesson for Chiba Prefectural Sakura High School students at the Central Research Laboratories



Lab lesson for Seishin Gakuen High School students at the Central Research Laboratories

## Kawamura Memorial DIC Museum of Art

The Kawamura Memorial DIC Museum of Art, located adjacent to the Central Research Laboratories in Sakura, Chiba Prefecture, was established in 1990 to publicly exhibit works of art collected by DIC Corporation and its affiliates. In 2016, the museum celebrated its 27th anniversary. The museum exhibits works from a collection that spans numerous genres, with a focus on 20th century American art, and encompasses works by Rembrandt; Impressionists such as Monet and Renoir; modern European artists such as Picasso and Chagall; and early modern, modern and postwar Japanese artists. Two exhibitions are scheduled for 2016: photographs taken by Cy Twombly, one of the most acclaimed artists of the 20th century, and works by celebrated painter and printmaker Léonard Foujita.

In addition to its standing exhibit from its permanent collection of more than 1,000 major works, the museum stages special exhibitions several times a year that focus on pertinent literary works and other artifacts that evoke the cultural atmosphere at the time works were created to help visitors better understand the collection. Another appealing aspect of the Kawamura Memorial DIC Museum of Art is its location on a lushly forested 10-hectare site alive with seasonal flowers and foliage that has been open to the public since the museum's establishment. In cooperation with the Chiba Biodiversity Center, the museum has also established a biodiversity satellite, a special display area featuring display panels explaining the importance of biodiversity, in one of the site's rest cabins.

In a move aimed at promoting relations with the local community and fostering local cultural activities, the museum has established an annex gallery on the museum site. This facility, which serves as an exhibition space for local amateur artists, is also made available once a year to elementary and junior and senior high schools in the Sakura area for an exhibition of local students' works. The Kawamura Memorial DIC Museum of Art also accepts local junior high school students for work experience programs and welcomes elementary and junior high school art classes, led by teachers, for museum tours, with the goal of further supporting art education.



Kawamura Memorial DIC Museum of Art



Nature trail traversing the museum site

## Siam Chemical Industry Receives CWR-DIW Award

In 2015, Group company Siam Chemical Industry Co., Ltd., was presented with a CSR-DIW Award for 2015 by the Thai Ministry of Industry, the fourth consecutive year it has been so honored. The CSR-DIW Award program was established in 2008 with the goal of raising the global competitiveness of Thai companies. Awards are given annually to companies in recognition of CSR initiatives judged as exceptional from the perspective of the seven core subjects defined in ISO 26000, the International Organization for Standardization's standard for social responsibility.

Siam Chemical's 2015 award was in recognition of its energy-saving initiatives, as well as volunteer activities such as mangrove planting and community support activities, including sponsorship for blood drives. Particularly high marks were given to the progress of efforts to minimize emissions of greenhouse gases by reducing its consumption of energy, which include tracking consumption and providing pertinent information to employees. Siam Chemical pledges to continue contributing to Thai society through effective sustainability initiatives designed to benefit residents of local communities as well as protect the environment.

## Matching Gift Program

DIC has a matching gift program whereby it matches the total amount collected through an annual year-end fundraising drive spearheaded by its employees' union. Funds raised through the 2015 drive and matching gift program were donated to 20 children's homes and facilities providing support for disabled individuals.



DIC employees visit child welfare facility Ryuyouen in Komaki, Aichi Prefecture, to present a donation

## Support for Reconstruction Following the Great East Japan Earthquake

Since 2011, DIC has provided support for reconstruction in areas devastated by the Great East Japan Earthquake as a participant in the IPPO IPPO NIPPON project, an initiative organized by the *Keizai Doyukai* (Japan Association of Corporate Executives) with the aim of assisting local residents in rebuilding their lives. This initiative, which is scheduled to continue for five years, seeks to support efforts to rebuild communities and stimulate local economies by delivering funds collected from corporate and individual donors directly to schools and other facilities in need of support.

DIC has also donated funds via the Japanese Red Cross Society to assist with recovery efforts in the wake of the 2016 Kumamoto Earthquake.



IPPO IPPO NIPPON project logo

# Promoting Disclosure and Communication

## Basic Approach to Promoting Communication

The DIC Group places a priority on communication with its stakeholders worldwide through direct dialogue in the form of, among others, participation in exhibitions, websites and events. By communicating effectively with stakeholders, the Group strives to ensure an adequate understanding of stakeholder expectations and to reflect such expectations in its business activities. The DIC Group is also expanding its awareness of the concept of stakeholder engagement, a key requirement under ISO 26000.

	Ties with customers	Ties with shareholders and investors	Ties with society	Ties with employees	Ties with the media
Basic approach	Build trusting relationships. By incorporating the demands of customers, seek to develop products that enhance customer satisfaction.	Ensure appropriate disclosure and build trusting relationships with shareholders and investors, encouraging both to evaluate DIC as an attractive investment.	Operate in harmony with the community and build positive relationships with local residents that will underpin the long-term sustainability of operations.	Provide workplaces that are conducive to job satisfaction and enable all employees to fulfill their potential. Over the long term, achieve true diversity.	Deepen mutual understanding through effective publicity, advertising and other communications efforts.
Communications tools	<ul style="list-style-type: none"> <li>● Websites</li> <li>● Product pamphlets</li> <li>● Corporate profile DVDs</li> <li>● DIC Report</li> </ul>	<ul style="list-style-type: none"> <li>● Websites</li> <li>● Press conferences</li> <li>● Annual report</li> <li>● Quarterly results announcements</li> <li>● <i>Yuka Shoken Hokokusho</i> (financial disclosure document required of listed companies in Japan)</li> <li>● Shareholder newsletters</li> <li>● Corporate profile DVDs</li> <li>● DIC Report</li> </ul>	<ul style="list-style-type: none"> <li>● Websites</li> <li>● Site reports</li> <li>● Corporate profile DVDs</li> <li>● DIC Report</li> </ul>	<ul style="list-style-type: none"> <li>● <i>DIC Plaza</i> (in-house newsletter)</li> <li>● Intranet</li> <li>● <i>DIC Pocket Book</i> (in-house Group data file)</li> <li>● DIC Report</li> </ul>	<ul style="list-style-type: none"> <li>● Press conferences</li> <li>● Interviews with journalists</li> <li>● DIC Report</li> </ul>
Opportunities for communication	<ul style="list-style-type: none"> <li>● Sales activities</li> <li>● Participation in exhibitions</li> </ul>	<ul style="list-style-type: none"> <li>● General shareholders' meetings</li> <li>● Results presentations</li> <li>● IR conferences</li> <li>● IR meetings</li> <li>● DIC IR Day</li> </ul>	<ul style="list-style-type: none"> <li>● Production facility tours</li> <li>● Participation in projects involving collaboration among industrial concerns, government bodies and academic institutions</li> <li>● Participation in community events</li> <li>● Environmental monitoring</li> </ul>	<ul style="list-style-type: none"> <li>● Labor-management councils</li> <li>● Results presentations for employees</li> <li>● Presentations on the DIC Group Code of Business Conduct</li> <li>● Sustainability presentations</li> </ul>	<ul style="list-style-type: none"> <li>● Newspapers</li> <li>● Economic publications</li> <li>● Industry publications</li> </ul>

## Ties with Customers

In fiscal year 2015, the DIC Group took part in numerous trade shows in Japan and overseas. Such events provided valuable opportunities for the Group to communicate with its customers.

In Japan, the DIC Group participated in the Tokyo Health Industry Show 2015, held in March 2015, exhibiting Spirulina, which is attracting attention as a superfood. In April, the Group took part in FINETECH Japan, where it exhibited polymer products that add value to displays and membranes used in peripheral equipment, among others. At CITE Japan 2015, in June, DIC highlighted comprehensive Group strengths with an exhibit introducing pigments for cosmetics from global market-leading pigments manufacturer Sun Chemical.

Overseas, the Group took part in display, packaging and coatings industry trade shows in multiple locations, including the United States, Germany, the PRC, Taiwan and India, all of which involved close cooperation between pertinent sales administrative divisions in Japan and overseas Group companies.

DIC Graphics held a private show at DIC's corporate headquarters in Tokyo. The show welcomed not only individuals from DIC Graphics customer companies but also trading company representatives and brand owners, among others, and featured a variety of products with the potential to resolve key issues for users, particularly in the packaging industry. On another front, the Central Research Laboratories, a key DIC Group R&D base located in Sakura, Chiba Prefecture, continued to welcome visitors to its showroom, which features displays illustrating the key role Group products play in everyday life, an approach designed to deepen public understanding of the DIC Group and its operations. In response to requests from sales departments and customers, the DIC Group holds study sessions on its sustainability initiatives as appropriate. In the period under review, Group printing inks customers from the PRC paid a visit to the Tokyo Plant, during which time was set aside for a discussion on sustainability issues, enabling DIC to introduce supply chain, environmental and human rights-related initiatives and exchange information with visitors.

On another front, efforts were expanded to provide detailed product information via Group websites. Additionally, the Group responded to customer queries regarding its CSR procurement practices, notably pertaining to environmental safety, social issues and human rights.



Presentation on sustainability initiatives for guests (Tokyo Plant)



DIC Graphics' 2015 private show (corporate headquarters)



DIC's booth at the European Coatings Show (Nuremberg, Germany)

## Ties with Shareholders and Investors

The DIC Group strives to ensure fair, appropriate and timely disclosure and to communicate closely with investors and incorporate their opinions and requests into its management and operating activities. In fiscal year 2015, the Group sought to enhance communication with domestic investors by holding two results presentations for institutional investors and securities analysts, as well as by participating in investor relations (IR) conferences and IR meetings of various types. The Group also held its first DIC IR Day, a new initiative designed to deepen understanding of growth strategies in core Group businesses. The theme of the 2015 DIC IR Day was the Group's pigments business.

Overseas, the Group held IR meetings in North America, Europe and Asia, encouraging greater understanding of the Group's strategies through presentations by senior executives. The Group also provides information to individual investors via the DIC website and conventional mass media to enhance familiarity with its operations.



Results presentation (February 2015)



DIC IR Day (September 2015)

## Ties with Society

In addition to the business community, the DIC Group takes steps to enhance communication with ordinary consumers, including students. In May 2015, the Group created an Introduction to DIC display corner at the Itabashi Public Library, which focused on the Group's efforts to develop environment-friendly products, one of its core sustainability initiatives, as well as on its social contribution efforts, including the Kawamura Memorial DIC Museum of Art.

DIC's calendar for 2015 earned a silver award in the corporate calendars category of the 66th All Japan Calendar Competition, sponsored by the Japan Federation of Printing Industries and Japan Printing News Co., Ltd. An annual event, the All Japan Calendar Competition recognizes the best calendars produced by general companies, publishers and printing companies, among others, in terms of printing technology, planning, design, functionality and creativity.



DIC's display at the Itabashi Public Library (Takashimadaira, Tokyo)



Award certificate from the All Japan Calendar Competition

## Communications in the Field of Education

For five days in March 2015, the Kawamura Memorial DIC Museum of Art staged SAKURAart, a group exhibition of artwork by students in Chiba Prefectural Sakura High School's industrial arts, photography, Japanese calligraphy and fine arts clubs and its Super Science High School seminar. The works of the Super Science High School\* seminar students were produced using traditional dyeing techniques, including natural vegetable dyeing and pigment dyeing, and processes such as aluminum casting, about which the students had studied. The early spring event welcomed approximately 1,200 visitors, including Living National Treasure Bizen pottery master Jun Isezaki, who showed particular interest in the pottery works on exhibit.

\* For related information, please see page 96.



SAKURAart exhibit at the Kawamura Memorial DIC Museum of Art

## Ties with Employees

The DIC Group promotes a variety of initiatives to encourage active communication with its employees around the world. From March through April 2015, the Group conducted an employee awareness survey in Japan, the PRC and the Asia-Pacific region with the aim of formulating effective strategies for promoting a new global branding program. *DIC Plaza*, the Group's in-house newsletter, which is published in Japanese and English, highlights the Group's global operations and introduces colleagues from around the world. In 2016, a new feature titled "The Front Line of Sustainability" was added with the goal of promoting understanding of sustainability initiatives. With an average of 138 items posted annually, the Group's intranet is another way for DIC to share information with employees worldwide and promote understanding of its activities.

Senior management also promotes opportunities for direct communication with employees. These include quarterly operating results presentations for employees given by the president and CEO, executive vice president and executive officers in charge of individual businesses, the goal of which is to enhance understanding of the Group's management strategies and the Group's current operating and financial status.

Four varieties of ornamental sunflower named after artists—Van Gogh, Vincent, Mateus and Monet—are cultivated on the grounds of the Kawamura Memorial DIC Museum of Art. In May 2015, an event was held at the museum that enabled Group employees and their families to participate in the planting of Van Gogh sunflower seeds and enjoy the museum's lush gardens.

On another front, the Group held sustainability presentations on location in March for employees in the PRC and via teleconference in October for employees in the Asia-Pacific region with the goal of raising awareness of its sustainability program.

DIC's new corporate headquarters building in Tokyo, which was completed in May 2015, boasts an advanced global-standard flexible communications infrastructure. This has created an open, multipurpose space that accommodates a variety of working styles and reinforces relationships among employees.



Results presentation for employees (February 2015)



*DIC Plaza*



Sunflower seed planting and art appreciation event (Kawamura Memorial DIC Museum of Art)

## Ties with the Media

DIC is reinforcing efforts to provide information with newspapers, magazines and other media as a means of enhancing its ability to communicate with its many stakeholders, including its customers and shareholders, investors and local communities. This reflects a conviction that effective, independent publicity and advertising that facilitates objective media coverage is vital to securing stakeholders' understanding of the DIC Group and its operations. In fiscal year 2015, DIC provided the media with information on a variety of key subjects, including new products, operating results, sustainability initiatives and personnel systems. Increased media coverage brought positive responses from stakeholders across the board.

Press conferences in fiscal year 2015	Interviews with journalists in fiscal year 2015
59	89

## External Assessments

In fiscal year 2015, DIC was selected for inclusion in the Dow Jones Sustainability Indices Asia Pacific Index, a leading benchmark for sustainability initiatives in the Asia-Pacific region and part of the Dow Jones Sustainability Indices (DJSI), a global family of indices for socially responsible investment (SRI). This is the first time DIC has been included in the DJSI Asia Pacific Index.

DIC also reports to the CDP (formerly the Carbon Disclosure Project), which works on behalf of institutional investors to motivate companies to disclose information on initiatives to combat climate change and key environmental data. The CDP has consistently recognized the Group's environmental initiatives and in fiscal year 2015 awarded it an overall score of 98A- (98 points for disclosure and a performance class of A-), one of the highest scores among materials manufacturers based in Japan.

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# DIC Report 2016 and ISO 26000: A Comparison

Core Subjects	No.	Themes	Relevant Page	Relevant Sections/Initiatives
Organizational Governance	6.2	Organizational governance	P5-6	A Message from the President
			P8-9	The DIC Group's Sustainability Program
			P13-15	Messages from Top Executives at Regional Headquarters
			P32	Corporate Governance
			P34-35	Toward Fair and Transparent Corporate Activities
			P36-38	Reducing Business Risks and Preventing the Recurrence of Incidents
			P77-80	Working to Enhance Job Satisfaction
			P88-90	Establish Solutions-Oriented Businesses
P98-101	Promoting Disclosure and Communication			
Human Rights	6.3.3	1: Due diligence	P8-9	The DIC Group's Sustainability Program
	6.3.4	2: Human rights risk situations	P34-35	Toward Fair and Transparent Corporate Activities
	6.3.5	3: Avoidance of complicity	P77-84	Working to Enhance Job Satisfaction
	6.3.6	4: Resolving grievances	P81	Reducing Extreme Overwork and Encouraging Employees to Take Annual Paid Leave
	6.3.7	5: Discrimination and vulnerable groups	P85-87	Expanding Sustainable Procurement Worldwide
	6.3.8	6: Civil and political rights	P95-97	Adding Color and Comfort to Lifestyles
	6.3.9	7: Economic, social and cultural rights		
	6.3.10	8: Fundamental principles and rights at work		
Labour Practices	6.4.3	1: Employment and employment relationship	P43-49	Occupational Safety and Health, Security and Disaster Prevention
	6.4.4	2: Conditions of work and social protection	P54	Reducing Energy Consumption and Increasing Product Quality through Kaizen Skill Improvement Training
	6.4.5	3: Social dialogue	P72-73	Complying with Laws and Regulations
	6.4.6	4: Health and safety at work	P76	New Efforts to Enhance Employee Education in the Area of Product Quality
	6.4.7	5: Human development and training in the workplace	P77-84	Working to Enhance Job Satisfaction
	P85-87	Expanding Sustainable Procurement Worldwide		
The Environment	6.5.3	1: Prevention of pollution	P31	<i>Aquacure</i> Inkjet Inks Technology Delivers the Positive Print Characteristics of a Water-Based Ink
	6.5.4	2: Sustainable resource use	P40-42	Promoting Responsible Care
	6.5.5	3: Climate change mitigation and adaptation	P43, 49	Occupational Safety and Health, Security and Disaster Prevention
	6.5.6	4: Protection of the environment, biodiversity and restoration of natural habitats	P50-62	Preventing Global Warming
			P63-64	Reducing Emissions of Chemicals into the Environment
			P65-66	Reducing Environmental Impact on Air, Water and Soil
			P67-69	Reducing Industrial Waste
			P70-73	Managing Chemical Substances in Products
			P74	Report on Other Initiatives
			P93	Promoting Environment-Friendly Products
		P97	Kawamura Memorial DIC Museum of Art	
Fair Operating Practices	6.6.3	1: Anti-corruption	P34-35	Toward Fair and Transparent Corporate Activities
	6.6.4	2: Responsible political involvement	P43, 49	Occupational Safety and Health, Security and Disaster Prevention
	6.6.5	3: Fair competition	P50	Preventing Global Warming
	6.6.6	4: Promoting social responsibility in the value chain	P53	Improving Yields by Expanding Use of System to Enhance the Visibility of Energy Consumption
	6.6.7	5: Respect for property rights	P61	Reducing Greenhouse Gas Emissions Attributable to Logistics
			P65	Reducing Environmental Impact on Air, Water and Soil
			P81	Reducing Extreme Overwork and Encouraging Employees to Take Annual Paid Leave
		P85-87	Expanding Sustainable Procurement Worldwide	
Consumer Issues	6.7.3	1: Fair marketing, factual and unbiased information and fair contractual practices	P31	<i>Aquacure</i> Inkjet Inks Technology Delivers the Positive Print Characteristics of a Water-Based Ink
	6.7.4	2: Protecting consumers' health and safety	P39	Initiatives to Ensure Information Security
	6.7.5	3: Sustainable consumption	P40-42	Promoting Responsible Care
	6.7.6	4: Consumer service, support, and complaint and dispute resolution	P70-73	Managing Chemical Substances in Products
	6.7.7	5: Consumer data protection and privacy	P75-76	Initiatives Aimed at Increasing Customer Satisfaction
	6.7.8	6: Access to essential services	P91-94	Proposing Solutions that Leverage Elemental Technologies
	6.7.9	7: Education and awareness	P99	Ties with Shareholders and Investors
Community Involvement and Development	6.8.3	1: Community involvement	P3-4	The DIC Group: A Global Powerhouse
	6.8.4	2: Education and culture	P34	The DIC Group Code of Business Conduct
	6.8.5	3: Employment creation and skills	P45	Training Skilled Safety Personnel to Predict Risks, Promoting Hands-On Safety Training
	6.8.6	4: Technology development and access	P47	Status of Occupational Accidents
	6.8.7	5: Wealth and income creation	P54	Reducing Energy Consumption and Increasing Product Quality through Kaizen Skill Improvement Training
	6.8.8	6: Health	P72-73	Complying with Laws and Regulations
	6.8.9	7: Social investment	P75-76	Initiatives Aimed at Increasing Customer Satisfaction
			P85-87	Expanding Sustainable Procurement Worldwide
			P91-94	Proposing Solutions that Leverage Elemental Technologies
			P95-97	Adding Color and Comfort to Lifestyles

# DIC Report 2016 and the G4 Sustainability Reporting Guidelines: A Comparison

This report was prepared using the GRI's G4 Sustainability Reporting Guidelines' "In accordance—Core" option.

Sub-Category	Aspect	DMA/Indicator	Disclosure	Page(s)
General Standard Disclosures				
Strategy and Analysis	G4-1	Statement from the most senior decision-maker	5-6 (A Message from the President) 13-15 (Messages from Top Executives at Regional Headquarters)	13-15 (Messages from Top Executives at Regional Headquarters)
	G4-2	Description of key impacts, risks and opportunities	22-30 (Special Feature) 8 (The DIC Group's Sustainability Program) 37 (Risk Management System)	
Organizational Profile	G4-3	Name of the organization	3 (The DIC Group: A Global Powerhouse) 110 (Corporate Data)	
	G4-4	Primary brands, products and services	16-21 (The DIC Group's Business Portfolio)	
	G4-5	Location of the organization's headquarters	3 (The DIC Group: A Global Powerhouse) 110 (Corporate Data)	
	G4-6	Number of countries where the organization operates	3-4 (The DIC Group: A Global Powerhouse) 111 (Corporate Data)	
	G4-7	Nature of ownership and legal form	3 (The DIC Group: A Global Powerhouse) 110 (Corporate Data)	
	G4-8	Markets served	3 (The DIC Group: A Global Powerhouse) 16-21 (The DIC Group's Business Portfolio) 91-94 (Proposing Solutions that Leverage Elemental Technologies)	
	G4-9	Scale of the organization	3 (The DIC Group: A Global Powerhouse) 16-21 (The DIC Group's Business Portfolio) 110-111 (Corporate Data)	
	G4-10	Breakdown of employees	[6-9 of <i>Yuka Shoken Hokokusho</i> ("Affiliated Companies")] 78 (Global Human Resources Management)	
	G4-11	Percentage of employees covered by collective bargaining agreements	Japan: 100% of employees belong to a labor union Overseas: Coverage by collective bargaining agreements in each country/region complies with local laws and regulations	
	G4-12	Organization's supply chain	85-86 (Expanding Sustainable Procurement Worldwide)	
	G4-13	Significant changes that occurred during the reporting period	NA	
	G4-14	Whether/how the precautionary approach or principle is addressed by the organization	36-38 (Reducing Business Risks and Preventing the Recurrence of Incidents) 40-42 (Promoting Responsible Care)	
	G4-15	Initiatives which the organization endorses	9 (Ensuring DIC Remains a Globally Trusted Corporate Citizen with a Proud Reputation) 40 (Promoting Responsible Care) 61 (Reporting to the CDP)	
	G4-16	Memberships of associations and national or international advocacy organizations in which the organization participates	UNBC, JCIA, Keidanren, <i>Keizai Doiyukai</i> , Japan Printing Ink Makers Association	
Identified Material Aspects and Boundaries	G4-17	List of entities included in the organization's consolidated financial statements or equivalent documents	3 (The DIC Group: A Global Powerhouse) 110-111 (Corporate Data)	
	G4-18	Process for drafting the report content and the aspect boundaries	8 (Sustainability Framework and Themes)	
	G4-19	Material aspects identified in the process for defining report content	33 (Overview of Materiality Analysis)	
	G4-20	Aspect boundary (within the organization) for each material aspect	Within the organization: DIC Group; Outside the Group: material aspects, namely, environment (reducing impact on society) and society (Promotion of Occupational Safety and Health, Respect for Human Rights); Some suppliers are also included in economy and governance (promoting supply chain management)	
	G4-21			
	G4-22	Reasons for any restatements of information provided in previous reports	NA	
G4-23	Significant changes in scope and aspect boundaries	NA		
Stakeholder Engagement	G4-24	List of stakeholder groups engaged by the organization	98 (Promoting Disclosure and Communication)	
	G4-25	Basis for identification and selection of stakeholders with whom to engage	8 (Basic Sustainability Policy)	
	G4-26	Organization's approach to stakeholder engagement	98-101 (Promoting Disclosure and Communication)	
	G4-27	Key topics and concerns that have been raised through stakeholder engagement	99 (Ties with Shareholders and Investors)	
Report Profile	G4-28	Reporting period	2 (About this Report)	
	G4-29	Date of most recent report	2 (About this Report)	
	G4-30	Reporting cycle	2 (About this Report)	
	G4-31	Contact point for questions regarding the report or its contents	C4	
	G4-32	"In accordance" option the organization has chosen	2 (About this Report)	
	G4-33	Organization's policy and current practice with regard to seeking external assurance for the report	40 (Initiatives to Date) 106 (Third-Party Verification)	
Governance	G4-34	Governance structure of the organization	9 (System for Promoting Sustainability) 32 (Corporate Governance)	
	G4-35	Process for delegating authority for the economic, environmental and social topics from the highest governance body to employees	9 (System for Promoting Sustainability)	
	G4-36	Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics	9 (System for Promoting Sustainability)	
	G4-37	The organization's process for consultation between stakeholders and the highest governance body on economic, environmental and social topics	9 (System for Promoting Sustainability)	
	G4-38	Composition of the highest governance body	9 (System for Promoting Sustainability) 32 (Corporate Governance) [30-32 of <i>Yuka Shoken Hokokusho</i> ("Directors and Corporate Auditors")] [33-36 of <i>Yuka Shoken Hokokusho</i> ("Corporate Governance")]	
	G4-39	Whether the Chair of the highest governance body is also an executive officer	[30 of <i>Yuka Shoken Hokokusho</i> ("Directors and Corporate Auditors")] [33 of <i>Yuka Shoken Hokokusho</i> ("Corporate Governance")]	
	G4-40	Nomination and selection processes for the highest governance body	2-3, 6 (Basic Approach to Corporate Governance)	




Governance	G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed	[25–26 of <i>Yuka Shoken Hokokusho</i> ("Major Shareholders")] [36–39 of <i>Yuka Shoken Hokokusho</i> ("Corporate Governance")]
	G4-42	The highest governance body's and senior executives' roles in the development, approval and updating of the organization's purpose, value or mission statements, Strategies, policies and goals related to economic, environmental and social impacts	9 (System for Promoting Sustainability)
	G4-45	The highest governance body's role in the identification process	8 (Sustainability Framework and Themes) 9 (System for Promoting Sustainability) 33 (Overview of Materiality Analysis) 37 (Risk Management System, The DIC Group's Perspective on Risk)
	G4-46	The highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics	9 (System for Promoting Sustainability)
	G4-47	The frequency of the highest governance body's review of economic, environmental and social impacts, risks and opportunities	9 (System for Promoting Sustainability) 32 (System of Internal Control)
	G4-48	The highest committee or position that formally reviews and approves the organization's sustainability report	9 (System for Promoting Sustainability)
	G4-51	Remuneration policies for the highest governance body and senior executives/How performance criteria in remuneration policies relates to the highest governance body's and senior executives' economic, environmental and social objectives	[36 of the <i>Yuka Shoken Hokokusho</i> ("Compensation for Directors")]
	G4-52	Process for determining remuneration	78 (Integrating DIC Group Executive Evaluation Systems) 32 (Basic Approach to Corporate Governance)
Ethics and Integrity	G4-56	The organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	7 (The DIC WAY) 11 (New Medium-Term Management Plan: DIC108)
	G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity	35 (Establishing and Operating a Whistle-Blowing System)
	G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity	35 (Establishing and Operating a Whistle-Blowing System)

Specific Standard Disclosures				
Disclosures on Management Approach		G4-DMA	DMA	33 (Overview of Materiality Analysis)
Economic	Economic Performance	DMA	DMA	11–12 (New Medium-Term Management Plan: DIC108)
		G4-EC1	Direct economic value generated and distributed	3–4 (The DIC Group: A Global Powerhouse)
	Indirect Economic Impacts	G4-EC7	Development and impact of infrastructure investments and services supported	95–97 (Adding Color and Comfort to Lifestyles)
Environmental	Energy	DMA	DMA	50 (Preventing Global Warming)
		G4-EN3	Energy consumption within the organization	50–62 (Preventing Global Warming)
		G4-EN5	Energy intensity	50–62 (Preventing Global Warming)
		G4-EN6	Reductions in energy requirements of products and services	50–62 (Preventing Global Warming)
	Water	G4-EN8	Total water withdrawal by source	65 (Reducing Environmental Impact on Air, Water and Soil)
		Emissions	DMA	DMA
	G4-EN15		Direct greenhouse gas emissions	50–62 (Preventing Global Warming)
	G4-EN17		Other indirect greenhouse gas emissions	53 (Improving Yields by Expanding Use of System to Enhance the Visibility of Energy Consumption) 61 (Reducing Greenhouse Gas Emissions Attributable to Logistics)
	G4-EN19		Reduction of greenhouse gas emissions	50–62 (Preventing Global Warming)
	G4-EN21		NOx, SOx and other significant air emissions	63–64 (Reducing Emissions of Chemicals into the Environment) 65–66 (Reducing Environmental Impact on Air, Water and Soil)
	Effluents and Waste	DMA	DMA	67 (Reducing Industrial Waste)
		G4-EN22	Total water discharge by quality and destination	65 (Managing Water Resources) 69 (Overview of Environmental Impact of the DIC Group's Operating Activities)
		G4-EN23	Total weight of waste by type and disposal method	67–69 (Reducing Industrial Waste)
		G4-EN24	Total number and volume of significant spills	NA
		G4-EN25	Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention	NA
	Products and Services	DMA	DMA	91 (Proposing Solutions that Leverage Elemental Technologies)
		G4-EN27	Extent of impact mitigation of environmental impacts of products and services	31 ( <i>Aquacure Inkjet Links Technology Delivers the Positive Print Characteristics of a Water-Based Ink</i> ) 93 (Promoting Environment-Friendly Products)
	Compliance	DMA	DMA	70 (Managing Chemical Substances in Products)
		G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	42 (Responsible Care Auditing)
	Transport	G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	43, 49 (Occupational Safety and Health, Security and Disaster Prevention) 50 (Preventing Global Warming) 53 (Improving Yields by Expanding Use of System to Enhance the Visibility of Energy Consumption) 61 (Reducing Greenhouse Gas Emissions Attributable to Logistics)
G4-EN31				Total environmental protection expenditures and investments by type
Supplier Environmental Assessment	DMA	DMA	85 (Expanding Sustainable Procurement Worldwide)	
	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	85–87 (Expanding Sustainable Procurement Worldwide)	
	G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	85–87 (Expanding Sustainable Procurement Worldwide)	
Environmental Grievance Mechanisms	G4-EN34	Number of grievances about environmental impacts filed, addressed and resolved through formal grievance mechanisms	NA	
Labor Practices and Decent Work	Employment	G4-LA1	Total number of rates of new employee hires and employee turnover by age group, gender and region	77–78 (Working to Enhance Job Satisfaction)
		G4-LA3	Return to work and retention rates after parental leave, by gender	80–81 (Enhancing Programs that Help Employees Balance the Demands of Work and Home)
	Labor/Management Relations	G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	A minimum notice period is provided as specified in labor agreements
	Occupational Health and Safety	DMA	DMA	43 (Occupational Safety and Health, Security and Disaster Prevention)
G4-LA6		Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number or work-related fatalities, by region and by gender	47 (Status of Occupational Accidents)	
G4-LA8		Health and safety topics covered in formal agreements with trade unions	81 (Reducing Extreme Overwork and Encouraging Employees to Take Annual Paid Leave) 82 Caring for Mental Health	

Labor Practices and Decent Work	Training and Education	DMA	DMA	77 (Working to Enhance Job Satisfaction)
		G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	45 (Training Skilled Safety Personnel to Predict Risks, Promoting Hands-On Safety Training Improvement Training) 54 (Reducing Energy Consumption and Increasing Product Quality through Kaizen Skill Improvement Training) 72-73 (Complying with Laws and Regulations) 76 (New Efforts to Enhance Employee Education in the Area of Product Quality) 77-84 (Working to Enhance Job Satisfaction)
		G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	82-83 (Securing and Fostering Human Resources)
	Diversity and Equal Opportunity	DMA	DMA	77 (Working to Enhance Job Satisfaction)
	Supplier Assessment for Labor Practices	G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership and other indicators of diversity	77-80 (Working to Enhance Job Satisfaction) [30-32 of <i>Yuka Shoken Hokokusho</i> ("Directors and Corporate Auditors")]
		DMA	DMA	85 (Expanding Sustainable Procurement Worldwide)
G4-LA14		Percentage of new suppliers that were screened using labor practices criteria	85-87 (Expanding Sustainable Procurement Worldwide)	
	G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	87 (Conducting On-Site Inquiries to Advance CSR)	
Labor Practices Grievance Mechanisms	G4-LA16	Number of grievances about labor practices filed, addressed and resolved through formal grievance mechanisms	NA	
Human Rights	Investment	G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	77 (Respect for Human Rights)
	Non-Discrimination	G4-HR3	Total number of incidents of discrimination and corrective actions taken	NA
	Child Labor	G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	34 (The DIC Group Code of Business Conduct) 85-87 (Expanding Sustainable Procurement Worldwide)
	Forced or Compulsory Labor	G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of all forms of forced or compulsory labor	34 (The DIC Group Code of Business Conduct) 81 (Reducing Extreme Overwork and Encouraging Employees to Take Annual Paid Leave) 85-87 (Expanding Sustainable Procurement Worldwide)
	Indigenous Rights	G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	NA
	Supplier Human Rights Assessment	DMA	DMA	85 (Expanding Sustainable Procurement Worldwide)
		G4-HR10	Percentage of new suppliers that were screened using human rights criteria	86 (Self-Evaluations, Analyzing the Results of Questionnaires)
		G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	85-87 (Expanding Sustainable Procurement Worldwide)
Human Rights Grievance Mechanism	G4-HR12	Number of grievances about human rights impacts filed, addressed and resolved through formal grievance mechanisms	NA	
Society	Local Communities/ Anti-Corruption	DMA	DMA	95 (Adding Color and Comfort to Lifestyles)
		G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	
		G4-SO4	Communication and training on anti-corruption policies and procedures	34-35 (Toward Fair and Transparent Corporate Activities)
		G4-SO5	Confirmed incidents of corruption and actions taken	NA
	Anti-Competitive Behavior	G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust and monopoly practices and their outcomes	NA
	Compliance	G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	42 (Responsible Care Auditing)
	Supplier Assessment for Impacts on Society	DMA	DMA	85 (Expanding Sustainable Procurement Worldwide)
G4-SO9		Percentage of new suppliers that were screened using criteria for impacts on society	85-87 (Expanding Sustainable Procurement Worldwide)	
G4-SO10		Significant actual and potential negative impacts on society in the supply chain and actions taken	85-87 (Expanding Sustainable Procurement Worldwide)	
	G4-SO11	Number of grievances about impacts on society filed, addressed and resolved through formal grievance processes	NA	
Product Responsibility	Customer Health and Safety	DMA	DMA	75 (Enhancing Product Quality and Customer Satisfaction)
		G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	75-76 (Enhancing Product Quality and Customer Satisfaction)
		G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	75-76 (Enhancing Product Quality and Customer Satisfaction)
	Product and Service Labeling	DMA	DMA	70 (Managing Chemical Substances in Products)
		G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	70-73 (Managing Chemical Substances in Products) 75 (Enhancing Customer Satisfaction)
		G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	NA
	Marketing Communications	DMA	DMA	88 (Establishing Solutions-Oriented Businesses)
		G4-PR6	Sale of banned or disputed products	NA
		G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes	NA
	Customer Privacy	G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	NA
	Compliance	G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	NA

# Third-Party Verification

  
May 18 2016

## Verification Statement

Mr. Yoshiyuki Nakanishi  
Representative Director, President and CEO  
DIC Co., Ltd.

**Objective**  
SGS Japan Inc. (hereinafter referred to as "SGS") was commissioned by DIC Co., Ltd. (hereinafter referred to as "the Organization") to conduct independent verification based on ISO14064-3:2006 and the SGS verification protocol regarding the data prepared by the Organization on performance data of GHG emissions, waste emissions and the number of occupational accidents (hereinafter referred to as "the assertion"). The objective of this verification is to confirm that the assertion in the Organization's applicable scope have been correctly calculated and reported in the assertion in conformance with the criteria, and to express our views as a third party.

**Scope**  
The scope of verification is limited to the assertion in 54 DIC and its domestic subsidiaries sites (including 21 offices and laboratories) and 144 DIC and its overseas subsidiaries sites.  
The performance data of Scope 1 and 2 are CO<sub>2</sub> emissions from energy consumption in domestic and overseas sites. The performance data of CO<sub>2</sub> emissions from non-energy consumption, Scope 3: category5 and waste emissions are included in domestic sites.  
The number of occupational accidents are included the number of accidents leading to workdays lost, the number of accidents not leading to workdays lost and the workdays lost in domestic sites.  
The period subject to report is from Jan 1, 2015 to Dec 31, 2015.

**Procedure of Verification**  
The assertion was verified in accordance with ISO14064-3: 2006 and the SGS verification protocol, and the following processes were implemented at a limited level of assurance:

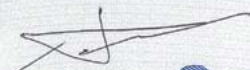
- Verification of the calculation system: interviews on the measurement, tabulation, calculation and reporting methods employed by the Organization as well as review of related documents and records
- Verification of the assertion: On-site verification, review of vouchers at Saitama Plant, Sakai Plant and analytical procedures and interviews carried out at all works included in the scope of verification at the Head office



The criteria for this review is based on "The Calculating and Reporting Manual for Greenhouse Gas Emissions Ver.4.0" of the Ministry of the Environment and the protocol specified by the Organization.

**Conclusion**  
Within the scope of the verification activities employing the methodologies mentioned above, nothing has come to our attention that caused us to believe that the Organization's assertion was not calculated and reported in conformance with the criteria.

**For and on behalf of SGS Japan Inc**  
Senior Executive & Business Manager  
Certification and Business Enhancement

Yuji Takeuchi

Signed: 



The DIC Group commissioned SGS Japan Inc. to conduct third-party verification of its data for greenhouse gas emissions, discharge of industrial waste and number of occupational accidents (including number of accidents leading to workdays lost).



Counselor,  
The Japan Research Institute, Limited  
**Eiichiro Adachi**

In his current capacity, Eiichiro Adachi conducts industry research and assesses corporate performance from the perspective of social responsibility. He also provides financial institutions with corporate information for socially responsible investing (SRI). A member of the Market Evolution and Corporations in the 21st Century working group organized by the *Keizai Doyukai* (Japan Association of Corporate Executives), Adachi was involved in the preparation of The 15th Corporate White Paper on "Market Evolution" and CSR Management: Toward Building Integrity and Creating Shareholder Value. He also served as a national expert for Japan to the ISO 26000 working group.

This third-party opinion reflects my view of the sustainability initiatives and information disclosure of the DIC Group, as understood from reading this report, from my perspective as an individual who provides corporate information to financial institutions to assist SRI. It is not intended as a comment on whether or not the information herein has been measured and calculated accurately to conform to commonly accepted standards for the preparation of environmental or other reports or a judgment on whether the report covers relevant important matters in full.

Once again this year, I had the honor of reviewing the DIC Report. The section on DIC's new medium-term management plan, DIC108, made a particularly strong impression, clarifying how the Company positions its various businesses by outlining four distinct business initiatives, which are to expand businesses that will drive growth, pursue opportunities for strategic investments (M&As, etc.), rationalize operations in mature markets and create next-generation businesses. I sensed a shift in the Company's focus toward building business models that respond to social imperatives.

I would like to offer a few suggestions for enhancing reporting sustainability initiatives, as well as disclosure.

First, I would like to see the Company further deepen its awareness of both opportunities and risks. Page 8 outlines 11 key sustainability themes. Of course, some of these themes contain elements that will serve as opportunities for the creation of new businesses, while others contain elements that indicate a need for strict risk management. Overall, the report leans more toward the former. A bit less attention devoted to initiatives would make it possible to identify factors with the potential to restrict businesses or harm competitiveness and ensure adequate pertinent disclosure. Also, on page 33 the Group's 22 materiality categories are too general, and as such it is rather difficult to ascertain what the Company views as particularly important. I propose that DIC narrow these down further, based on its awareness of social imperatives, to create more concrete categories that align better with the unique attributes of the Group's businesses and strategies.

Second, I would like to see a significant increase in the disclosure of initiatives in overseas markets. The DIC Group includes 143 companies overseas, with 61.7% of consolidated net sales and 56.3% of consolidated operating income accounted for by operations outside Japan. Nonetheless, the report features examples drawn overwhelmingly from its domestic operations, as a result of which it is not easy to form a clear understanding of the Group as a whole. If there are circumstances hindering efforts to promote the sharing of information, perhaps consideration should be given to the idea of publishing site reports in various regions.

Third, I would like to see the Company strengthen its environmental measures. Minimizing the impact of operations on the environment is a particularly critical challenge for manufacturers of chemicals products. At the COP21 climate summit held in December 2015 in Paris, participating countries adopted the Paris Agreement, which reconfirmed an existing goal of limiting the increase in global average temperatures to well below 2 degrees Celsius from preindustrial levels. With countries and regions seeking to move away from the idea of a carbon-constrained future and to promote decarbonization, we are seeing the implementation of diverse measures around the world. From the information on pages 52 and 57, it would appear that the efforts of DIC Group companies in Japan and overseas to reduce CO<sub>2</sub> emissions have leveled off. From the information on page 63, we see that efforts to realize reductions in emissions of chemicals into the environment have also come up short. Moreover, there are no indications that the Group is seeking to replace chemicals that are necessary for operations or chemicals in products with alternatives that have less of an environmental impact, or other factors that would give readers a more comprehensive understanding. In the next edition of DIC Report, I hope to see further progress in the disclosure of such important information.

# DIC Group Milestones

## 108 Years of Achievement

### 1908 Established as Kawamura Ink Manufactory

Established by Kijuro Kawamura as Kawamura Ink Manufactory; adopts the dragon as its product trademark and begins manufacturing inks.



Dragon product trademark



DIC's founder, Kijuro Kawamura

**1915**  
**Commences production of offset printing inks**  
Becomes one of the first companies to conduct research in the area of offset printing inks and succeeds in producing a viable product in only one year.

**1925**  
**Begins production of organic pigments**  
Develops production method for organic pigments and begins production for its own use, the first step in its evolution as a fine chemicals manufacturer.

**1940**  
**Commences production of water-based gravure inks**  
Amid wartime restrictions on use of volatile oils, develops water-based gravure inks—one of several achievements that would later facilitate expansion into synthetic resins.

**1952**  
**Makes full-scale entry into the synthetic resins business**  
Establishes Japan Reichhold Chemicals Inc., then the second-largest joint venture with an overseas firm in the history of the Japanese chemicals industry, and makes a full-scale entry into the synthetic resins business.



Reichhold Chemicals' San Francisco plant

**1957**  
**Enters the market for helmets and other molded plastic products**  
Enters the plastic products business with the aim of becoming an integrated manufacturer with operations encompassing production of everything from plastic raw materials to finished products.

**1962**  
**Changes Company name to Dainippon Ink and Chemicals**

Embarks on a new chapter in its history by absorbing Japan Reichhold Chemicals, Inc., and changes Company name to Dainippon Ink and Chemicals Incorporated (DIC).



DIC's previous corporate symbol

**1968**  
**Commences sales of the DIC Color Guide®**  
Launches the *DIC Color Guide*®, which becomes the de facto standard for color selection in numerous industries, bolstering recognition of the DIC name.



DIC Color Guide®

Promotes expansion of printing inks business

Diversifies operations by building on base in printing inks, organic pigments and synthetic resins

Actively introduces technologies from overseas and promotes further diversification

## Sustainability Initiatives

**1973**  
**Establishes the Environment and Safety Response Department**  
Creates department under the direct supervision of DIC's president to oversee safety and environmental initiatives (today's Responsible Care Department); creates Environment and Safety Management Regulations and Interim Emergency Countermeasures Department and begins promoting decisive efforts, including the implementation of plant safety inspections.

**1990**  
**Opens Kawamura Memorial Museum of Art**  
Located in Sakura, Chiba Prefecture, adjacent to the Central Research Laboratories; established to exhibit works of art collected by DIC and DIC Group companies; now called the Kawamura Memorial DIC Museum of Art.



**1995**  
**Declares intention to uphold the principles of Responsible Care**  
Takes an active role in the Responsible Care movement since the start as one of 74 founding members of the Japan Responsible Care Council (JRCC); reinforces efforts to, among others, reduce negative environmental impact of operations and lower energy consumption.



Responsible Care®

**2006**  
**Becomes signatory to the Responsible Care Global Charter**  
Signs the CEO's Declaration of Support for the Responsible Care Global Charter, established by the International Council of Chemical Associations, as befits its status as a member of the global community of fine chemicals manufacturers.



Certification of DIC as Signatory to the Responsible Care Global Charter

## 1970

### Enters the multilayered films business

Establishes Crown Zellerbach Packaging Materials Japan Co., Ltd., in a joint venture with Crown Zellerbach Corporation of the United States and Nippon Kakoh Seishi Co., Ltd., and enters the multilayered films business.

## 1973

### Enters the market for LCs

Develops revolutionary high-performance, long-lasting nematic LCs, commencing its evolution into one of the world's foremost manufacturers of LCs.



Nematic LCs

## 1986

### Acquires the graphic arts materials division of Sun Chemical Corporation of the United States

Becomes world's largest manufacturer of printing inks in terms of market share and a leading name in the graphic arts materials business.



Sun Chemical's headquarters

## 1999

### Succeeds in developing 100% soybean oil-based printing ink

Amid rising awareness of environmental issues, develops Japan's first organic solvent-free sheetfed offset ink.

New Champion  
Naturalith 100  
organic solvent-free  
sheetfed offset ink



## 1999

### Acquires Coates, the printing inks division of France's TOTALFINA

Establishes presence in India, Central and South America and elsewhere by acquiring the Coates Group from TOTALFINA S.A., France's largest oil company.

## 2008

### Changes Company name to DIC Corporation

Marks centennial anniversary by changing Company name to DIC Corporation and adopting a new corporate symbol.



DIC's new corporate symbol

## 2009

### Establishes DIC Graphics Corporation

In October 2009, establishes a joint venture with Dai Nippon Printing Co., Ltd. subsidiary The Inctec Inc. and integrates its domestic printing inks business with the printing inks business of The Inctec.

## 2015

### Completes reconstruction of corporate headquarters in Nihonbashi

In May 2015, completes the reconstruction of its corporate headquarters—the DIC Building—in Nihonbashi, Tokyo, the role of which was expanded to include oversight of the global DIC Group.



DIC Building

## 2016

### Launches DIC108 medium-term management plan

Sets forth a growth scenario aimed at realizing sustainable growth and outlines what DIC must do between now and fiscal year 2018.

Seeks to advance globalization of core businesses and diversify into new areas

Takes steps to advance environmental protection and expands global presence

Prepares for a new phase of growth

## 2007

### Launches CSR program

Begins promoting CSR initiatives; identifies fulfilling its responsibilities as a member of society through its business activities and contributing to the evolution of society as the cornerstones of CSR.

## 2010

### Joins United Nations Global Compact

In December 2010, becomes a participant in the United Nations Global Compact, with the aim of maintaining its reputation as a socially responsible corporate entity.



## 2014

### Changes designation to "sustainability"

Clarifies its overall policy of achieving sustainability in a manner that takes into account, among others, the environment, ecosystems and socioeconomic issues, and changes the designation used across its program from "CSR" to "sustainability."



In-house poster promoting sustainability initiatives

## 2015

### Selected for inclusion in the Dow Jones Sustainability Indices Asia Pacific Index

Included for the first time in the DJSI Asia Pacific Index, a global family of indices for socially responsible investing and a benchmark of global sustainability.

MEMBER OF

**Dow Jones Sustainability Indices**

In Collaboration with RobecoSAM

## Corporate Data

Registered name: DIC Corporation

Registered address: 35-58, Sakashita 3-chome, Itabashi-ku, Tokyo 174-8520, Japan

Corporate headquarters: DIC Building, 7-20, Nihonbashi 3-chome, Chuo-ku, Tokyo 103-8233, Japan  
Tel: +81-3-6733-3000

Date of foundation: February 15, 1908

Date of incorporation: March 15, 1937

Paid-in capital: ¥96.6 billion

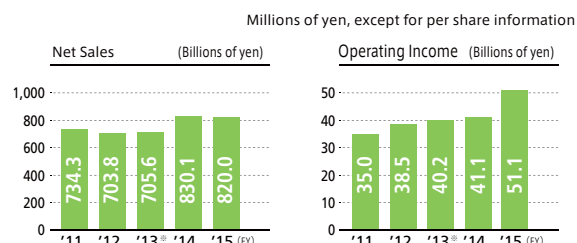
Number of employees: 20,264 (Nonconsolidated: 3,581)

Domestic facilities: Two branch offices and nine plants

Number of subsidiaries and affiliates: 174 (Domestic: 31, Overseas: 143)

## Consolidated Financial Highlights

	Fiscal year 2014 (Year ended December 31, 2014)	Fiscal year 2015 (Year ended December 31, 2015)
Net sales	¥830,078	¥819,999
Operating income	41,076	51,068
Ordinary income	39,925	48,995
Net income	25,194	37,394
Earnings per share (yen)	26.78	38.94
Total assets	803,703	778,857



Note: The consolidated results for fiscal year 2013 comprise the accounts for the nine months ended December 31, 2013, of DIC and its domestic subsidiaries but one and the 12 months ended December 31, 2013, of its overseas subsidiaries and one domestic subsidiary.

(Information is as of December 31, 2015.)

## Board of Directors

Representative Director: Yoshiyuki Nakanishi

Representative Director: Masayuki Saito

Director: Yoshihisa Kawamura

Director: Hitoshi Wakabayashi

Director: Kaoru Ino

Director: Takao Suzuki\*

Director: Yukako Uchinaga\*

\* Outside

## Executive Officers

President and CEO	Yoshiyuki Nakanishi	Executive Officer	Rudi Lenz
Executive Vice President	Masayuki Saito	Executive Officer	Hideki Inouchi
Managing Executive Officer	Yoshiaki Masuda	Executive Officer	Masaya Nakafuji
Managing Executive Officer	Toshio Hasumi	Executive Officer	Koji Tanigami
Managing Executive Officer	Hitoshi Wakabayashi	Executive Officer	Shinsuke Toshima
Managing Executive Officer	Kazunari Sakai	Executive Officer	Sakae Yoshida
Managing Executive Officer	Hideo Ishii	Executive Officer	Taihei Mukose
Managing Executive Officer	Masami Hatao	Executive Officer	Kiyotaka Kawashima
Managing Executive Officer	Kaoru Ino	Executive Officer	Masanobu Mizukoshi
Managing Executive Officer	Toshifumi Tamaki	Executive Officer	Hiroyuki Ninomiya
Executive Officer	Naoyoshi Furuta	Executive Officer	Kazuo Hatakenaka

(Information is as of March 29, 2016.)

## Corporate Auditors

Corporate Auditor: Jiro Mizutani

Corporate Auditor: Yoshiyuki Mase

Corporate Auditor: Katsunori Takechi\*

Corporate Auditor: Cindy Yoshiko Shirata\*

\* Outside

## Headquarters/Branches in Japan

### Corporate Headquarters

**Headquarters**  
DIC Building, 7-20, Nihonbashi 3-chome, Chuo-ku, Tokyo 103-8233, Japan  
Tel: +81-3-6733-3000

### Branch Offices

**Osaka**  
5-19, Kyutaro-machi 3-chome, Chuo-ku, Osaka 541-8525, Japan  
Tel: +81-6-6252-6161 Fax: +81-6-6245-5239

### Nagoya

7-15, Nishiki 3-chome, Naka-ku, Nagoya 460-0003, Japan  
Tel: +81-52-951-9381 Fax: +81-52-962-3591

### Plants

**Tokyo**  
35-58, Sakashita 3-chome, Itabashi-ku, Tokyo 174-8520, Japan  
Tel: +81-3-3966-2111 Fax: +81-3-3965-4320

### Chiba

12, Yawatakaigandori, Ichihara, Chiba 290-8585, Japan  
Tel: +81-436-41-4141 Fax: +81-436-43-1059

### Hokuriku

64-2, Minatomachi-So, Hakusan, Ishikawa 929-0296, Japan  
Tel: +81-76-278-2332 Fax: +81-76-278-5354

### Sakai

3, Takasago 1-chome, Takaiishi, Osaka 592-0001, Japan  
Tel: +81-72-268-3111 Fax: +81-72-268-1705

### Kashima

18, Higashifukashiba, Kamisu, Ibaraki 314-0193, Japan  
Tel: +81-299-93-8111 Fax: +81-299-92-6384

### Yokkaichi

5, Kasumi 1-chome, Yokkaichi, Mie 510-0011, Japan  
Tel: +81-59-364-1151 Fax: +81-59-364-1620

### Komaki

151-1, Nagare, Shimosue, Komaki, Aichi 485-0825, Japan  
Tel: +81-568-75-2751 Fax: +81-568-73-4120

### Saitama

4472-1, Komuro, Ina-machi, Kita-Adachi-gun, Saitama 362-8577, Japan  
Tel: +81-48-722-8211 Fax: +81-48-722-6087

### Tatebayashi

6023, Tobukogyodanchi, Ohshima-cho, Tatebayashi, Gunma 374-0001, Japan  
Tel: +81-276-77-2461 Fax: +81-276-77-2468

### Laboratories

#### Central Research Laboratories

631, Sakado, Sakura, Chiba 285-8668, Japan  
Tel: +81-43-498-2121 Fax: +81-43-498-2229

### Art Museum

**Kawamura Memorial DIC Museum of Art**  
631, Sakado, Sakura, Chiba 285-8505, Japan  
Tel: +81-43-498-2672 Fax: +81-43-498-2139

(Information is as of March 31, 2016.)

## Principal Domestic Subsidiaries and Affiliates

Cast Film Japan Co., Ltd.  
DC Katsuya Co., Ltd.  
DIC Covestro Polymer Ltd.  
DIC Color Coatings, Inc.  
DIC Color Design, Inc.  
DIC Decor, Inc.  
DIC EP Corp.  
DIC Estate Co., Ltd.  
DIC Graphics Corporation  
DIC Interior Co., Ltd.  
DIC Investments Japan, LLC.

DIC Kako, Inc.  
DIC Kitanihon Polymer Co., Ltd.  
DIC Kyushu Polymer Co., Ltd.  
DIC Lifetec Co, Ltd.  
DIC Machinery & Printer's Supplies, Inc.  
DIC Material Inc.  
DIC Plastics, Inc.  
Hamamatsu DIC Co., Ltd.  
Japan Formalin Company, Inc.  
KJ Chemicals Corporation  
Mizushima Kasozai Co., Ltd.

Nippon Epoxy Resin Manufacturing Co., Ltd.  
Oxirane Chemical Corp.  
Renaissance, Inc.  
Seiko PMC Corporation  
SUNDIC Inc.  
Techno Science, Inc.  
Topic Co., Ltd.  
YD Plastics Co., Ltd.

(Information is as of March 31, 2016.)

## Principal Overseas Subsidiaries and Affiliates

### Asia and Oceania (Excluding Japan)

Aekyung Chemical Co., Ltd.  
Changzhou Huari New Material Co., Ltd.  
DIC Alkylphenol Singapore Pte., Ltd.  
DIC Asia Pacific Pte Ltd  
DIC Australia Pty Ltd.  
DIC (China) Co., Ltd.  
DIC Colorants Taiwan Co., Ltd.  
DIC Compounds (Malaysia) Sdn. Bhd.  
DIC Epoxy (Malaysia) Sdn. Bhd.  
DIC Fine Chemicals Private Limited  
DIC Graphics (Guangzhou) Ltd.  
DIC Graphics (Hong Kong) Ltd.  
DIC Graphics (Thailand) Co., Ltd.  
DIC Graphics Chia Lung Corp.  
DIC (Guangzhou) Co., Ltd.  
DIC India Ltd.  
DIC Korea Corp.  
DIC Korea Liquid Crystal Co., Ltd.  
DIC Lanka (Private) Ltd.  
DIC (Malaysia) Sdn. Bhd.  
DIC New Zealand Ltd.  
DIC Pakistan Ltd.  
DIC Philippines, Inc.  
DIC (Shanghai) Co., Ltd.  
DIC Synthetic Resins (Zhongshan) Co., Ltd.  
DIC (Taiwan) Ltd.  
DIC Trading (HK) Ltd.  
DIC (Vietnam) Co., Ltd.  
DIC Zhangjiagang Chemicals Co., Ltd.  
Guangzhou Lidye Resin Co., Ltd.  
Hainan DIC Microalgae Co., Ltd.  
Kangnam Chemical Co., Ltd.  
Lianyungang DIC Color Co., Ltd.  
Lidye Chemical Co., Ltd.  
Nantong DIC Color Co., Ltd.  
Nantong Shan Kai Ming Ke Trading Co., Ltd.  
PT DIC ASTRA Chemicals  
PT. DIC Graphics  
P.T. Pardic Jaya Chemicals  
Qingdao DIC Finechemicals Co., Ltd.  
Qingdao DIC Liquid Crystal Co., Ltd.  
Samling Housing Products Sdn. Bhd.  
Seiko PMC (Shanghai) Commerce & Trading Corp.  
Seiko PMC (Zhangjiagang) Corporation  
Shanghai DIC Ink Co., Ltd.  
Shanghai DIC Pressure-Sensitive Adhesive Materials Co., Ltd.  
Shenzhen-DIC Co., Ltd.  
Siam Chemical Industry Co., Ltd.

Sun Chemical (Hai'an) Limited  
Sun Chemical Holding (Hong Kong) Ltd.  
Sun Chemical Trading (Shanghai) Co., Ltd.  
Suqian Lintong New Materials Co., Ltd.  
Suzhou Lintong Chemical Science Corp.  
TOA-DIC Zhangjiagang Chemical Co., Ltd.  
Zhongshan DIC Colour Co., Ltd.

### Europe and Africa

Benda-Lutz Skawina Sp. z.o.o.  
Benda-Lutz Volzhsky ooo  
Benda-Lutz Werke GmbH  
Coates Brothers (East Africa) Ltd.  
Coates Brothers (West Africa) Ltd.  
Coates Screen Inks GmbH  
DIC Europe GmbH  
DIC Holdings Austria GmbH  
DIC Holdings B.V.  
DIC Performance Resins GmbH  
ECG Holdings Ltd.  
Gibbon FineCal Ltd.  
Glenside Properties Limited  
Hartman D.O.O.  
Hartmann Druckfarben GmbH  
Hartmann-Sun Chemical EOOD  
Kingfisher Colours Ltd.  
Lorilleux Maroc S.A.  
Parker Williams Design Ltd.  
Sun Branding Solutions Ltd.  
Sun Chemical AB  
Sun Chemical AG  
Sun Chemical AG (S.A., Ltd.)  
Sun Chemical A/S  
Sun Chemical A/S  
Sun Chemical B.V.  
Sun Chemical d.o.o.  
Sun Chemical for Graphic Arts S.A.E.  
Sun Chemical GmbH  
Sun Chemical Group Coöperatief U.A.  
Sun Chemical Group S.p.A.  
Sun Chemical Holding B.V.  
Sun Chemical Inks Ltd.  
Sun Chemical Inks A/S  
Sun Chemical Lasfelde GmbH  
Sun Chemical Ltd.  
Sun Chemical N.V./S.A.  
Sun Chemical Nyomdafestek Kereskedelmi es Gyarto KFT (Sun Chemical KFT)  
Sun Chemical Osterode Druckfarben GmbH  
Sun Chemical Oy  
Sun Chemical Pigments S.L.

Sun Chemical Portugal-Tintas Graficas Unipessoal Ltda.  
Sun Chemical Printing Ink d.o.o.  
Sun Chemical Publication A.E.  
Sun Chemical Publication Romania S.R.L.  
Sun Chemical Publications Bulgaria EAD  
Sun Chemical S.A.  
Sun Chemical S.A.S.  
Sun Chemical (South Africa) (Pty) Ltd.  
Sun Chemical s.r.l.  
Sun Chemical, s.r.o.  
Sun Chemical, s.r.o.  
Sun Chemical Sp. z.o.o.  
Sun Chemical Turkey  
Sun Chemical Ukraine Ltd.  
Sun Chemical ZAO  
Sun Inkjet Ceramics, S.L.

### North, Central and South America

Benda-Lutz Corporation  
Camus Water Technologies LLC  
Coates Brothers (Caribbean) Ltd.  
DIC Imaging Products USA, LLC  
DIC International (USA), LLC  
Earthrise Holdings Inc.  
Earthrise Nutritionals, LLC.  
Inmobiliaria Sunchem, S.A. de C.V.  
Mondis Manufacturers Insurance Company N.V.  
New England Manufacturers Insurance Corp.  
Rycoline Products, LLC  
SC Funding LLC  
SC (Puerto Rico) Ink  
Sinclair International Inc.  
Sinclair S.A.S.  
Sinclair Sun Chemical Ecuador S.A.  
Sun Chemical (Chile) S.A.  
Sun Chemical Corporation  
Sun Chemical de Centro America, S.A. de C.V.  
Sun Chemical de Panama, S.A.  
Sun Chemical do Brasil Ltda.  
Sun Chemical Inks S.A.  
Sun Chemical Ltd.  
Sun Chemical Management, L.L.C.  
Sun Chemical of Michigan LLC  
Sun Chemical Peru S.A.  
Sun Chemical S.A. de C.V.  
Sun Chemical Venezuela C.A.  
Tintas S.A.S.  
Wiseman International Co., Ltd.

(Information is as of March 31, 2016.)



# DIC Corporation

Corporate Communications Dept.

DIC Building, 7-20, Nihonbashi 3-chome, Chuo-ku, Tokyo 103-8233, Japan

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<http://www.dic-global.com/en/>



MEMBER OF

**Dow Jones  
Sustainability Indices**

In Collaboration with RobecoSAM ●●