

# KOLON INDUSTRIES

Lifestyle Innovator



## About This Report

**Features of This Report** This is the Sixth Sustainability Report published by KOLON INDUSTRIES, INC. KOLON Industries has been publishing the Sustainability Report every year (published as the Environmental Report from 2014 to 2017) to share its sustainable management outcomes with more stakeholders and to collect their opinions. The latest report was published on October 23, 2018.

**Standards for Preparation** This report was prepared under the Global Reporting Initiative (GRI) Standards and the core options of the GRI Guidelines.

**Reporting Period** This report was prepared based on the sustainable management performance between January 1 and December 31 of 2018. It outlines quantitative performance for the most recent 3 years, and the latest qualitative performance and important management activities from the first half of 2019.

**Scope of Report** KOLON INDUSTRIES, INC. comprises the Manufacturing Organization, which is a chemical materials company, and the FnC Organization, which is a clothing/fashion company. The scope of this report covers the head office and 8 plants (Gumi, Gyeongsan, Gimcheon 1, Gimcheon 2, Ulsan, Yeosu, Daesan, Incheon) of the Manufacturing Organization and excludes the head office and establishments of the FnC Organization and overseas subsidiaries. However, important management information such as the financial performance of the FnC Organization has been included.

**Reliability of Report and Additional Information** To increase the reliability of the information provided in this report, the reporting process, material assessment, opinions of stakeholders, and data were verified by an independent third-party agency. Details of the verification results can be found in the Verification Statement on page 68. If you have any opinions or inquiries about the sustainable management of KOLON INDUSTRIES, INC. please contact us using the contact information below.

|                             |   |                  |              |
|-----------------------------|---|------------------|--------------|
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| <b>Place of Publication</b> | ESH Management Team, 6F KOLON One & Only Tower, 110, Magokdong-ro, Gangseo-gu, Seoul, South Korea |                  |              |
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# Lifestyle Innovator

2018 KOLON Industries SUSTAINABILITY REPORT

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**CEO MESSAGE**

**Dear respected stakeholders,  
KOLON Industries is always respectful of  
your support.**

The global economy has shown low growth for a long time and now faces a difficult situation due to protectionism of nations triggered by the US-China trade war. Despite such economic and political uncertainties, we are focusing our capacity on the core businesses and developing new materials to solidify the base for sustainable growth. In 2016, the UN and international society proposed the 17 SDGs involving issues related to the society, global environment, climate change and economy. KOLON Industries deeply considered the business areas to help resolve such issues and find safety and happiness for the humankind.

Examples that show the sustainable growth strategy of KOLON Industries based on the SDGs include its investment in transparent polyimide (CPI®) films for the next-generation foldable phones, development of membrane electrode assemblies (MEA) for fuel cells used to make hydrogen-electric vehicles, and expansion of overseas plants for tire cord and airbag businesses.





Companies that aim to achieve sustainable growth must secure sustainability of intrinsic business values in addition to external growth. KOLON Industries makes sure that the basic values of sustainable management such as legal compliance, human rights, environment, ethics, and fair trading are covered. KOLON Industries stresses the Ten Principles of the UNGC for this reason. We protect human rights and respect rights of workers. We practice 'shared growth and accordance' with partners. For instance, we signed a fund agreement with Woori Bank to finance loans at low interest rates.

All global business sites of KOLON Industries are carefully preventing child labor and discrimination against age, sex, and religion. The 'gender quota system' implemented in 2002 ensures that over 30% of new employees are women. Other efforts to eradicate discrimination in employment such as new hiring and promotion of female executives have continued every year since 2010. We prohibit employees from making illicit gains and engaging in corrupt acts. Various institutional measures were taken to make sure that all principles are executed properly.

We understand that companies related to chemical materials and fashion have greater environmental responsibilities, and thus have been placing sincere efforts to preserve the global environment. KOLON Industries fulfills such requirements through the 'ESHQ(Environment, Safety, Health, Quality) management system.'

To promote carbon-neutral growth, we reduced greenhouse gas emission by over 300,000 tons from 2015 to 2017 and provided carbon credit of over 200,000 tons until 2018. Chemical substances are safely managed throughout the life cycle based on SAICM(Strategic Approach to International Chemicals Management) of the UN. Our manufacturing sector conducts research on recycling of plastics for business use. Our fashion sector launched an upcycling brand called 'RE; CODE' to recreate values of waste resources. In addition, we are considering the RE100(Renewable Energy 100%) strategy to increase the use of renewable energy.

'Change and innovation' are the philosophy and strategy of KOLON Industries. KOLON changed the lives of Korean people by introducing nylon. Similarly, products and services of our company aimed to bring about great changes. All of our employees are constantly working for innovation. Excellent capability and devotion of employees led to wonderful performance of our company, which made me feel proud and thankful as the CEO.

KOLON Industries will practice the ideology of KOLON Group to 'contribute to the abundance of human life and development of human civilization.' We have the ability and passion to overcome any difficulties. KOLON Industries is ready to grow further and offer richer and happier lives to people. 'Change and innovation' of KOLON Industries as a 'Lifestyle Innovator' will be continued.

Sincerely,

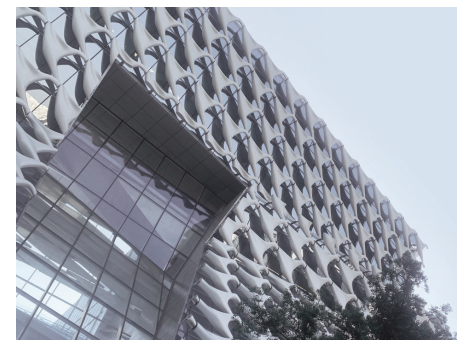


2019. 09. 20  
CEO and President of KOLON INDUSTRIES, INC., Hee-Goo Jang



# Company Overview




KOLON INDUSTRIES, INC. started out as Korea's first nylon producer, under the name of Korea Nylon, in 1957. In 2010, the Manufacturing Department of KOLON, INC. was split off into KOLON INDUSTRIES, INC. The business areas of KOLON Industries include industrial materials, chemical materials, film/electronic materials, and fashion. The company leads the market as a Lifestyle Innovator.



|                       |   |
|-----------------------|---|
| As of December 2018   |   |
| Company name          | KOLON INDUSTRIES, INC.  |
| Representative        | Hee-Goo, Jang   |
| Date of Establishment | January 5, 2010   |
| Business areas        | Industrial materials, film/electronic materials, chemicals, fashion |
| Head office Location  | 110, Magokdong-ro, Gangseo-gu, Seoul (Magok-dong)                   |
| No. of employees      | 3,791 persons*  |
| Capital               | KRW 148.7 billion   |
| Sales volume          | KRW 4.7526 trillion   |

\* Based on 2018 Annual Report (Employees of FrC Organization are included)

## Management Philosophy and Vision System

|             |  |
|-------------|--|
| Vision      |  <p>Innovation of customer's lifestyle by providing products and services that enhance the quality of living</p>  |
| Goal        | <p>To become a global top chemical/material company in the 21st century</p>  |
| Core values |  <p>To foster unique and differentiated competencies and a high level of competitiveness in all employees with the aim of becoming the most beloved company among customers</p> |
| Pursuit     |  <p>KOLON, most beloved by customers<br/>Unique and differentiated company<br/>Highly competitive individuals</p>   |



### Major Business Sites

KOLON Industries has its Head office and R&D center in Seoul Magok Industrial Complex, and operates 8 factories in Gumi, Gyeongsan, Gimcheon 1,2, Ulsan, Yeosu, Daesan, and Incheon. Also, the company has established a global network by founding overseas corporations in China, Indonesia, Vietnam, and Mexico and subsidiaries in Japan, Germany, the U.S., and China.

★ Head office ● Factory ● Branch

### Major Subsidiaries and Affiliates

**Subsidiaries** total number of subsidiaries: 40, as of the end of 2018

| Subsidiary Name                | Business Description   | Share (%) |
|--------------------------------|--|-----------|
| <b>KOLON GLOTECH, INC.</b>     | Manufacture and selling of fiber materials and automotive interior materials | 79.83%    |
| <b>KOLON PLASTICS, INC.</b>    | Manufacture, processing, and selling of polyoxymethylene resins              | 66.68%    |
| <b>KOLON Nanjing Co., Ltd.</b> | Manufacture of tire cords and airbags  | 88.90%    |
| <b>KOLON MATERIALS, INC.</b>   | Manufacture, selling and dyeing processing of chemical fibers                | 66.67%    |

**Affiliates** total number of affiliates: 5, as of the end of 2018

|                                |  |         |
|--------------------------------|--|---------|
| <b>SKC KOLON PI</b>            | Manufacture of synthetic resins and other plastic substances | 27.03%* |
| <b>KOLON BASF InnoPOM INC.</b> | Manufacture of plastic substances                            | 50.00%  |

\* Practical co-owner that has the same share rate as SKC Co., Ltd. with remaining share below 50%

# Business Overview

KOLON Industries is a leader of the Korean chemical fiber industry that focused on nylon and polyester fiber businesses until the 1970s. Since the 1980s, the company has become a large-scale material maker by diversifying its businesses to polymer and precision chemistry based on synthetic fiber technologies. The company has broadened its business areas to industrial materials, chemical materials, film/electronic materials, and fashion and now engages in vigorous activities in the domestic and global markets. KOLON Industries enhances the customer's lifestyle and meets the expectations of shareholders by presenting such diverse and stable business portfolios.

## Industrial Materials

**Tire Cord - HIPERCODE®, ROAD MASTER®** Tire cord is a tire reinforcement material that is determinative of tire performance, such as dimensional stability and vehicle weight. KOLON Industries had started the tire cord business since 1973 and has proven the high-quality and developed technology to not only domestic customers but also foreign customers, including Michelin, Bridgestone, etc.

**Industrial Yarn - AKILEN®** AKILEN® is the world's best polyester yarn for automotive safety belts. It is a yarn for special industries that has a much better strength compared to ordinary polyester materials. Because of their excellent quality, both the general white yarn and dyed yarn are applied to automobiles around the world. The excellence of this yarn is acknowledged by leading automobile makers at home and abroad.

**Airbag - SECURA®, SECURA STELEN®** The airbag is a typical safety device in an automobile, along with the safety belt. Most vehicles include airbags, and the use of airbags is increasing rapidly worldwide. KOLON Industries supplies cushion (which creates an air pocket in the case of a collision) and fabric to domestic and foreign automotive parts and module companies.

**Aramid - HERACRON®** Aramid is a reinforced fiber useful in industries that require high-strength and lightweight materials such as bulletproof jackets, optical cables, aircraft, and ship parts due to its tensile strength being five times as strong as their on of the same weight, and due to its qualities of being lightweight, highly heat-resistant, and having low tear strength.

**Spunbond - FINON®** Spunbond is a non-woven fabric made of polyester materials with excellent physical and chemical properties. KOLON Industries was the first in Korea to begin production of spunbond, and the company is offering the best solution to the material market for industrial use, architecture/civil engineering, automotive, and carpet, based on continuous technology development.

**Artificial Leather - CHAMUDE®** Chamude is an artificial leather that is produced by undergoing a special process based on microfiber technology. It can enable free expression of color and adjustment of thickness freely. This innovative and advanced material is applied to a variety of fields, including automotive interior materials, fashion, furniture, and interior, due to its excellent durability, moisture permeability, air permeability, comfortability, and thermal insulation.



**Membrane - ECOMATE®** Membrane humidifier and MEA are core materials of hydrogen-electric vehicles that increase the performance of hydrogen vehicles and improve durability. KOLON Industries will grow into a company that contributes to society by operating eco-friendly businesses using hydrogen energy.

## Chemical Materials

**Hydrocarbon Resin - SUKOREZ®, HIKOREZ®, HIKOTACK®** Hydrocarbon resin is used as road marking paint to ensure the safety of vehicles and human traffic, adhesive tape in offices, various adhesives, print ink, sanitary materials, tires, and all other products that require adhesiveness. It increases convenience in different parts of everyday life.

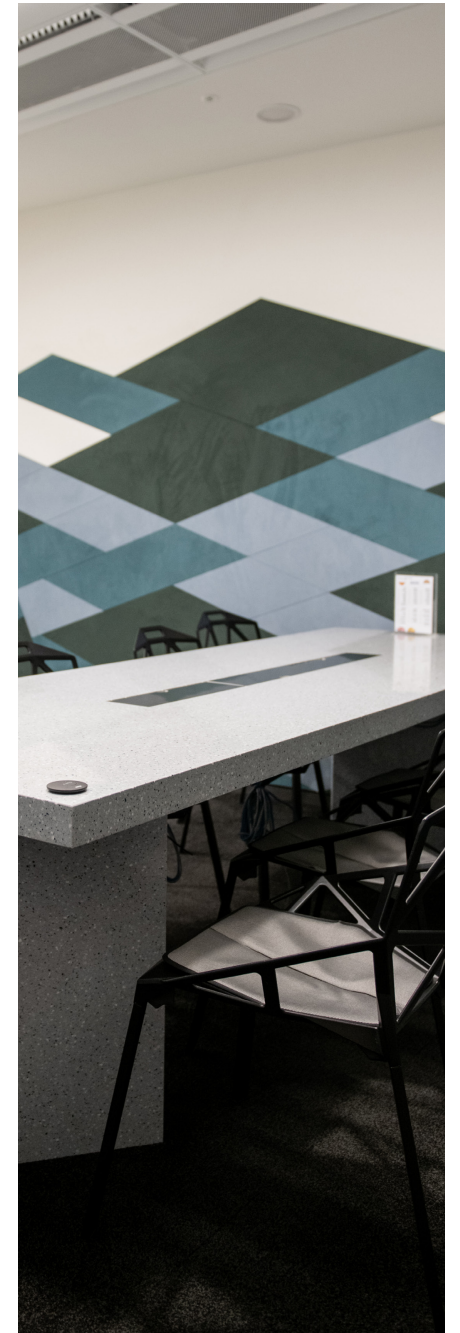
**Phenolic Resin - HIRENOL®** Phenol resin has excellent heat resistance, chemical resistance, dimensional stability, electric insulation, and mechanical strength. It applies to a wide range of areas, including casting (manufacture of engine), friction material (brakes), felt (automotive interior material), refractory (refractory binder such as blast furnace), adhesives, paint, ink, tires/rubber, electronic materials and insulation foam board.

**Epoxy Resin - HIROXY®** Epoxy resin is one of the most excellent functional polymers that has been developed to date. It is used in high value-added industries such as automotive, mobile, communication server, composite material, advanced electronic circuit, and aerospace structure Industries. KOLON Industries meets the needs of customers by organizing competent product portfolios based on a consistent production system of epoxy resin, hardener (Phenolic Resin), and intermediate.

**Polyurethane (PU) / Thermoplastic Polyurethane (TPU) - KONY URETHANE™, ELLAS®** Polyurethane (KONY URETHANE®) is a semi-permanent material with excellent impact absorption and durability. It can be constructed seamlessly for use as the floor materials in parking lots and athletic stadiums. Fiber PU is appropriate for waterproof/permeable fabrics and functional outdoor clothes. TPU (ELLAS®) is manufactured for various purposes such as hoses (power cables, medical), snow chains, shoes, and railway pads by blending with other plastics and rubbers due to its excellent wear resistance, mechanical strength, rubber elasticity, and flexibility.

## Film/Electronic Materials

**Polyester Film - ASTROLL®** Produced starting in 1985, ASTROLL® is a polyester film developed by KOLON Industries using proprietary fiber technology. It provides superb physical, chemical, and electrical properties and is widely used in industrial materials, including optical, electrical materials, electrical insulation, and solar devices. It also has a wide range of applications in high-value products, such as stamping foils, drawing films, rainbow films, and dry film resists.





**Nylon Film - AMIDROLL®** AMIDROLL® is the first nylon film to be successfully localized in Korea by KOLON Industries. It has outstanding impact strength and wear resistance properties and also has excellent gas barrier properties, because of these properties, it can be widely used in food packaging and cell pouch which contains electrolyte as secondary battery as well as industrial materials.

**Dry Film - ACCUIMAGE®** The demand for high-end dry film products has been increasing recently for semiconductors. ACCUIMAGE® of KOLON Industries maintains the No. 1 market share in the Korean market with outstanding quality and price competitiveness comparable to global companies.

**Panel Material - ONLYMER®** Overcoat is a transparent liquid material for LCD color filters. This product of KOLON Industries is maintaining its No. 1 spot in terms of market share in the Chinese market for wide-area, 8th generation IPS. With the introduction of 10.5th generation in China, the panel material of the company will continue to increase its market share in the Chinese market.

**Prism Film - EverRay®** Prism film is a core material that concentrates light from a light source in LCD BLU by forming a fine prism structure on a polyester film. It is sold overseas because of its high brightness and excellent reliability.

**Barrier Film - EverRay®** Barrier film is a quantum dot (QD) film material that protects QD films against moisture and oxygen. QD films play the role of embodying wide color on LCD display of an LED light source. KOLON Industries is making efforts to expand its sales abroad.

**CPI (Colorless Polyimide Film) - CPI®** This is a colorless PI film developed by KOLON Industries drawing attention as an essential material for future foldable displays thanks to its excellent heat resistance, mechanical properties, and flexibility. KOLON Industries is the only mass producer of transparent PI materials in the world, leading the market with vast research know-how and mass-production technology.

**Fashion**

The FnC Organization launched ELORD and JACK NICKLAUS led by its own outdoor lifestyle brand called KOLON SPORT and has been leading the efforts to create and diffuse domestic outdoor and sports culture through licensing of the HEAD brand. Also, it has been setting the trends by presenting various brands such as epigram, CUSTOMELLOW, CLUB CAMBRIDGE, LUCKY CHOUETTE, and SUECOMMA BONNIE to satisfy a wide range of customers with different lifestyles and tastes. On the one hand, an up-cycling brand called Re;Code was launched to solve the problems of leftover stocks and waste of resources in the fashion industry. Also, 'Common Ground' was opened as an innovative market platform different from existing department stores and complex commercial areas to reinvigorate commercial districts and support young artists. The FnC Organization of KOLON Industries suggests a lifestyle that can create diverse values in customers beyond the consumption of economic values.



**Innovation for the Future**

**Innovation of R&D and Technology**

The head office and R&D center of KOLON Industries was relocated to 'KOLON One & Only Tower' in Magok-dong, Gangseo-gu, Seoul, in April 2008, along with its affiliates, KOLON Life Science and KOLON Glotech. KOLON One & Only Tower is a hub of knowledge fusion that combines the R&D, sales, and support functions of each company for future growth. KOLON Industries reinforces Cross Functional Communication (CFC) among organizations and creates a synergy with other business areas. To do so, the company focuses on R&D and technology innovation above all.

During the year of 2018, KOLON Industries invested KRW 89.5 billion in R&D expense, about 2% of the sales revenue, whereas average domestic petrochemical companies only spend about 1% of sales revenue.

Based on such R&D investment and technology innovation, the company has built the world's first mass production facility for transparent PI film called CPI®. CPI®, which was using the unique technology of KOLON Industries, is a next-generation display material targeting foldable smartphones. It was awarded the Component of the Year Award at the Society for Information Display (SID) 2018 held in LA. KOLON Industries has secured the best global technologies with 121 domestic patents and 201 foreign patents related to CPI®.

In addition, ever since the system for the IR52 Jang Young-Shil Award was implemented from 1991 to award organizations with innovative new technologies and products, KOLON Industries has shown its excellence in technology by receiving the award 26 times. Also, KOLON Industries has been acknowledged for its excellence of technology and marketability through the selection of Laser Direct Imaging (LDI) dry film resist (in 2018) and petroleum resin (in 2002) as World Class Product of Korea.

KRW  
**89.5** billion

2018 R&D investment

**Global expansion and exporting status**

Nations with factories and facilities **7** nations

Major export nations **China, US, EU, Central and South America, etc.**

Ratio and amount of export in sales (by individual) **43.3%**  
(KRW 1.45 trillion)







# Our History

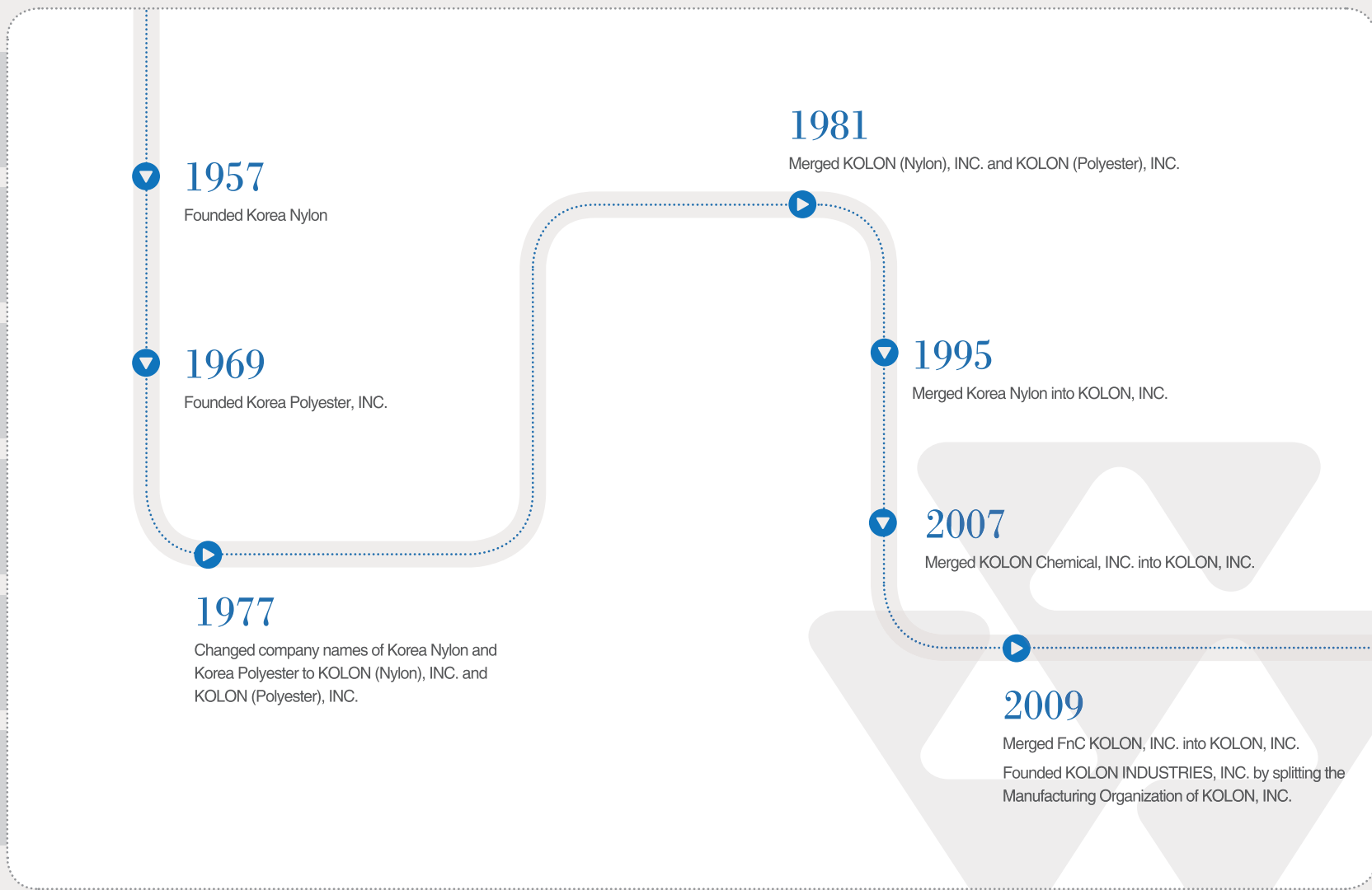
KOLON Industries innovatively changed clothing in Korea by producing the nation's first nylon. By leading the Korean chemical fiber industry for over 60 years, KOLON Industries has transformed into a global chemical/material and fashion company based on its polymer and precision chemistry technology. As the company has been directing lifestyle changes as a Lifestyle Innovator, KOLON Industries will strive to bring about desirable changes to our society through sustainable management.

## Major Business Outcome

## History

## Major Outcome of Sustainable Management

- 
**1985**  
 Developed film, videotape, medical, polyester spunbond
- 
**2008**  
 Acquired AKILEN MARINE® ABS certification (first in Asia)
- 
**2013**  
 Commercialized the world's first moisture controller for fuel cells
- 
**2017**  
 Developed OLED materials
- 
**2018**  
 Completed construction of tire cord factory in Vietnam
- 
**2019**  
 Mass produced transparent polyimide film for the first time in the world



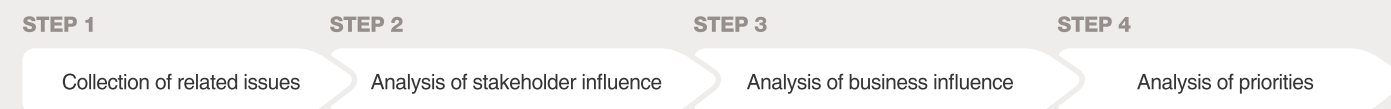
- 
**1999**  
 Joined Responsible Care Initiative
- 
**2014**  
 Published the First Sustainability Report
- 
**2015**  
 Opened Common Ground
- 
**2017**  
 Acquired Energy Champion Certification (Gumi, Gimcheon 1, Yeosu)
- 
**2018**  
 Joined the UN Global Compact
- 
**2018**  
 Achieved 86.7% of 2018 ISO 14001 certification (Based on manufacturing business sites at home and abroad)



# Materiality Assessment

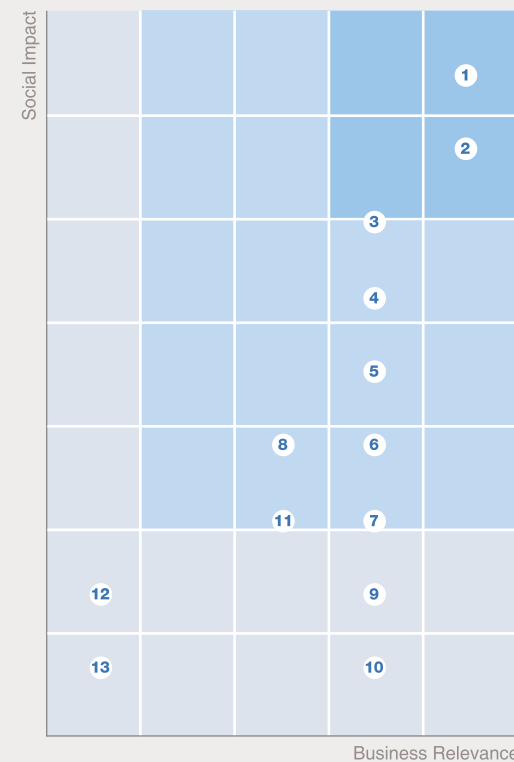
KOLON Industries conducted a materiality assessment to sort out various topics related to the internal and external business environment and stakeholders, which affect value creation and long-term performance. A total of 470 topics were drawn by analyzing the internal issues of KOLON Industries, the issues of stakeholders (including media research), international guidelines, and industrial trends. These topics were reclassified according to GRI Standards, and 13 key topics were selected based on the importance and probability of topics by considering the influence of stakeholders and businesses of KOLON Industries. Among key topics selected, new topics such as the advancement of business structure, strengthening of core competencies, governance, participation of stakeholders, and development of human resources were newly emphasized this year. The specific materiality assessment process is as follows.

## Materiality Assessment Process



## Materiality Assessment Results

| No. | Topic  | Report Page |
|-----|--|-------------|
| 1   | Environmental management                             | 16~21       |
| 2   | Strengthening of core competencies                   | 11          |
| 3   | Occupational safety and health                       | 22~27       |
| 4   | Ethics and compliance                                | 39~41       |
| 5   | Governance   | 38          |
| 6   | Advancement of business structure                    | 8~11        |
| 7   | Human rights and prohibition of discrimination       | 30~32       |
| 8   | Development of human resources                       | 34          |
| 9   | Innovation of work system and organizational culture | 34~35       |
| 10  | Employment and labor-management relationship         | 33          |
| 11  | Shared growth  | 46~47       |
| 12  | Participation of stakeholders                        | 15          |
| 13  | Contribution to local community                      | 48~49       |

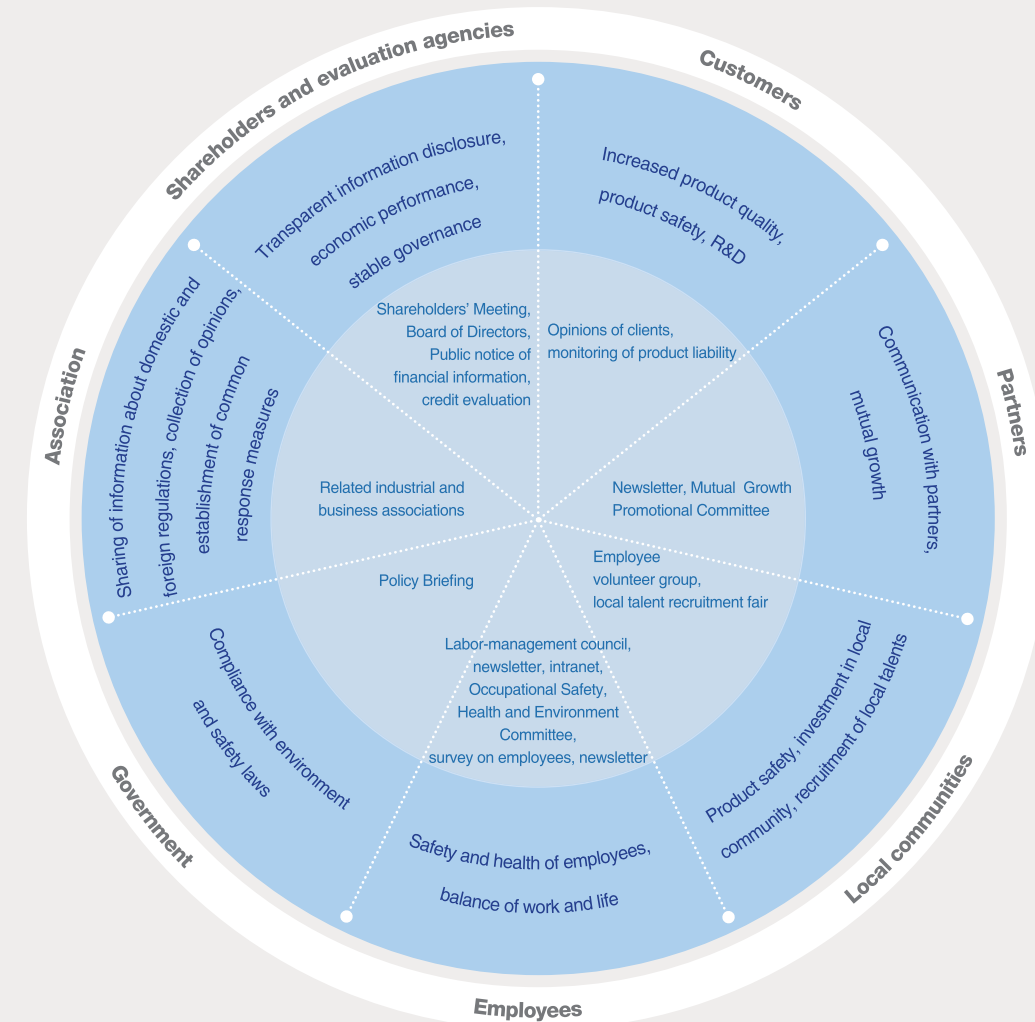


# Participation of Stakeholders

KOLON Industries practices sustainable management by reflecting the opinions of various internal and external stakeholders, including shareholders, customers, employees, partners, local communities, associations, the government, media, and NGOs. The company has prepared a communication channel for each group to enable consistent communication and involvement of stakeholders. Offline and online communication activities are in place to secure communication channels. Based on collected opinions.

Sustainable management goals and strategies are established based on collected opinions, and also, the opinions are reflected throughout management activities. KOLON Industries will become a “communicative company” by listening attentively to the opinions of stakeholders through various channels.

## Stakeholder Communication Channels





DMA 01

# Response to Climate Change and Environmental Preservation

Greenhouse gas reduction was only implemented by developed nations after the Kyoto Protocol of 2005. Under the Paris Climate Agreement established in 2015, however, it was expanded to 195 nations around the world. All participating nations are striving to reduce greenhouse gas emissions. South Korea also enforces the carbon credit system to reduce carbon emissions to 37% of BAU by 2030. Such a climate change issue is both a crisis and an opportunity at the same time. Companies face financial risks such as direct investment and carbon credit costs and physical risks such as delay of production due to natural disasters. On the other hand, companies can take advantage of increasing competitiveness by showing active responses, such as the development of eco-friendly technologies and products.

## 2018 Our Performance



**680,283 tCO<sub>2</sub>eq**

Greenhouse gas emissions in 2018



**8 types**

Number of chemicals 1<sup>st</sup> registered registrations of the company



**86.7%**

Ratio of business sites with ISO 14001 certification  
Based on manufacturing sites at home and abroad



**11.65%**

Recycling rate of packing products compared to number

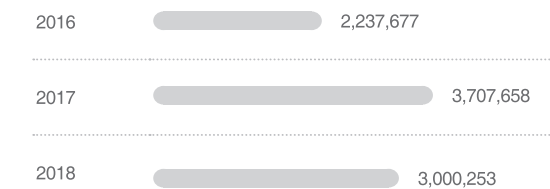


### Approach of KOLON Industries

KOLON Industries engages in various activities to secure competitiveness with regards to climate change issues at home and abroad. The company lavishes investment in eco-friendly facilities and processes to attain the annual reduction goals set forth by the government. In addition, GEMS, a greenhouse gas / energy management system, has been established to systematically manage the GHG emission status and the amount of emission rights of the company. Furthermore, the company actively takes part in future climate change response activities by developing eco-friendly products such as fuel cell membrane electrode assemblies for hydrogen-electric vehicles. KOLON Industries will endeavor to reduce greenhouse gas emissions, save energy, and develop eco-friendly products.

### Performance Measurement

Annual environmental investment (unit: KRW 1,000)





# Environmental Management

## Environmental Management Policy

KOLON Industries implemented the ESHQ management system in 2002, recognizing its environmental responsibility in the early stage. The company pre-registered EU REACH in 2008, organized the Climate Change Response Committee in 2009, and established green management strategies under the Framework Act on Low Carbon, Green Growth in 2010. It has successfully responded to domestic and foreign environmental regulations that undergo ceaseless changes, such as the Act on Registration, Evaluation, etc. of Chemicals, the Chemical Substances Control Act, and the carbon credit trading system in 2015 and the Act on the Integrated Control of Pollutant-Discharging Facilities in 2018. In addition, KOLON Industries establishes a policy to make safe and clean products for customers by systematically managing all processes, ranging from the use of raw materials to the generation of wastes.

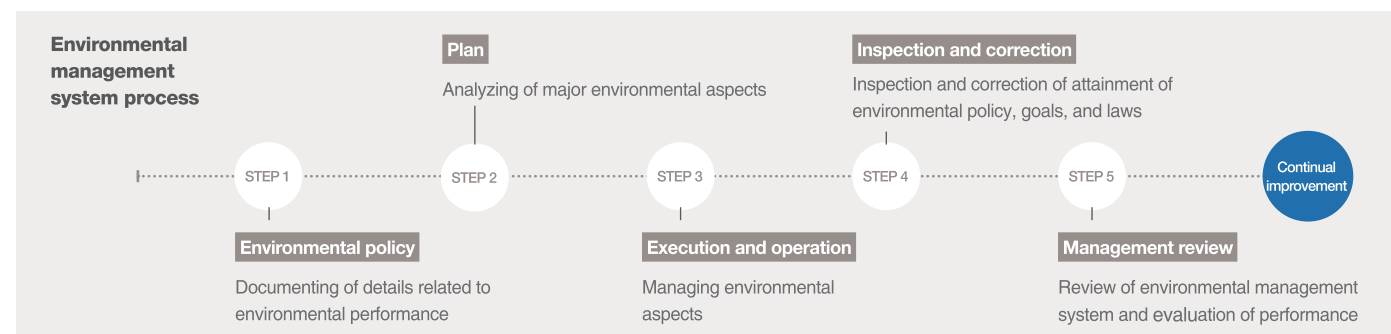
### Restrictions and regulations related to environmental management of KOLON Industries

| Major Restrictions  | Major Regulations  |
|---|--|
| <ul style="list-style-type: none"> <li>• Framework Act on Low Carbon, Green Growth</li> <li>• Carbon credit trading system</li> <li>• Act on Registration, Evaluation, etc. of Chemicals</li> <li>• Chemical Substances Control Act</li> <li>• Act on the Integrated Control of Pollutant-Discharging Facilities</li> <li>• Producer responsibility recycling system</li> </ul> | <ul style="list-style-type: none"> <li>• Energy Management Regulation</li> <li>• Water Quality Management Regulation</li> <li>• Environmental Consignment Management Regulation</li> <li>• Waste Management Regulation</li> <li>• Soil Environment Management Regulation</li> <li>• Environmental Aspect and Impact Assessment Regulation</li> <li>• Noise and Vibration Management Regulation</li> <li>• Atmosphere Management Regulation</li> <li>• Odor Management Regulation</li> <li>• Toxic Substance Management Regulation</li> </ul> |

## Environmental Management System

KOLON Industries built a system to identify the environmental impact of its business activities, domestic and overseas environmental policies, and legal compliance. To ensure the operation of the system, the environmental management supervisor was appointed as the Head of Technology Division, and the ESH Management Team is in charge of the system.

Regarding environmental management system certification, there is an international certification system for environmental management in general, which was established by the International Organization for Standardization (ISO) called ISO 14001. As of 2018, Kolon Industries has been certified at 100% of domestic manufacturing sites (Gumi, Gyeongsan, Gimcheon 1,2, Ulsan, Yeosu, Daesan, Incheon) and some overseas sites, and the coverages will be expanded to include all overseas business sites.



# Climate Change Response

## Greenhouse Gas / Energy Management System

KOLON Industries has consistently been developing the Greenhouse and Energy Management System (GEMS), starting with the construction of the Greenhouse Gas Inventory in 2009. This system engages in integrated management of data such as energy usage, greenhouse gas emissions, target, reduction rate, and reduction potential of each business site. KOLON Industries analyzes energy and greenhouse gas data to establish measures such as the replacement of old facilities, the recollection of waste heat, process improvement, and mobile combustion management and to set forth greenhouse gas reduction goals.

| Greenhouse gas emissions and energy usage | Unit                | 2016    | 2017    | 2018    |
|---|---------------------|---------|---------|---------|
| Greenhouse gas emissions                  | tCO <sub>2</sub> eq | 640,051 | 657,075 | 680,283 |
| Energy usage                              | TJ                  | 12,036  | 12,407  | 12,681  |

KOLON Industries steadily practices reduction and establishes its own strategies according to '2030 Greenhouse Gas Reduction Road Map' of the government. The company has been taking part in the Carbon Disclosure Project (CDP) since 2016 to establish climate change response strategies based on quantitative data. KOLON Industries set the goal to lower greenhouse gas emissions, which were approaching 800,000 tons per year in the early 2010's, to 684,748 tCO<sub>2</sub>eq by 2018, but through great efforts, actually managed to reduce emissions by 0.65%, down to 680,283 tCO<sub>2</sub>eq.

## Climate Change Response Activities

KOLON Industries encourages the daily practice of employees to offset greenhouse gas emissions and strives to create eco-friendly business sites based on the system.



Green Building Certification LEED V4



Green Building Certification

**Carbon Neutral Program** The Carbon Neutral Program is a part of the climate change response policy operated by the government since 2008. Individuals and companies practice greenhouse gas reduction measures in everyday life. KOLON Industries is promoting the carbon neutral campaign to save energy. The head office and local business sites are replacing lighting fixtures to high-efficiency LED while preventing the waste of power by installing lighting fixtures that include detection sensors and brightness control. On Arbor Day, employees of the head office engaged in a carbon reduction activity to plant trees and flowers with the residents of Gangseo-gu. In addition, KOLON Industries operates shuttle buses to reduce the private use of private cars by employees and has opened an electric vehicle charging station to reduce carbon emissions for commuting.

**Eco-Friendly Business Sites** The head office in Magok was completed in 2018 for the goal of 'Zero Energy Building' from its design. KOLON Industries used electricity generated by solar power panels, natural radiation and geothermal heat for cooling and heating and established an air conditioning system that reduces the energy use of public space. As a result, an eco-friendly building was constructed to save energy by 20% and water resources by 50% compared to the existing building. The office building received LEED (Leadership in Energy & Environmental Design) V4 Gold Grade of the U.S. Green Building Council for the first time in Korea, which is one of the three major eco-friendly building certifications in the world, and also Green 1 grade of Korea Research Institute of Eco-Environmental Architecture.

\* V4 is the latest certification standard of LEED for newly built buildings, which applies to 8 areas such as sustainable site development, reduction of water resources, energy saving, and resource recycling.

| Energy reduction outcome | Unit            | 2016      | 2017      | 2018      |
|--------------------------|-----------------|-----------|-----------|-----------|
| Reduction outcome (goal) | KRW 100 million | 72.9 (80) | 72.1 (80) | 55.8 (60) |

In addition, all manufacturing sites of KOLON Industries strive to reduce waste of energy in the production process and reuse energy. 'Reduction of steam usage by increased condensation latent heat at the Daesan Factory' is a representative example of increasing the stability of the process and saving energy through the optimization of steam pressure. Through this, steam usage at Daesan Factory was reduced by about 6%.

**Carbon Credit Trading** KOLON Industries has been reporting annual greenhouse gas emissions and trades deficient or surplus carbon credits in the market under the carbon credit trading system enforced in 2015. Fortunately, the company sold surplus carbon credits by overachieving the reduction goal set forth by the government in the first planned period (2015-2017), but it is necessary to buy carbon credits in the second planned period (2018-2020) despite the continued reduction efforts. Although the shortage in 2018 was covered by carbon credits carried over from the first planned period (about 90,000 tons), any subsequent shortages need to be purchased. However, KOLON Industries will minimize the purchase of carbon credits in the remaining part of the second planned period.

## Reduction of Environmental Impact



### Ulsan Factory

Selected as an excellent business site that leads resource circulation

Resource Circulation Day Award Ceremony

## Minimization of Environmental Impact in Production Process

KOLON Industries minimizes the environmental impact of three areas, including water and raw materials, wastes, and air pollutants.

There are limitations in expanding the use of recycled raw materials because the quality of raw materials is directly linked to the quality of products and safety of customers in the material industry. KOLON Industries improves its processes and facilities to minimize the use of raw materials and reduce waste. In addition, the basic unit of raw materials was reduced by 0.04%p compared to previous year through optimal design in the R&D stage, and the amount of recycled wastes per ton of raw materials is increasing every year. And, we recycle water and waste generated in the process, and the water and waste recycling rates in 2018 were 45.98% and 76.59%, respectively.

KOLON Industries has been fulfilling legal obligations to prevent pollution regarding the safety and environmental rights of local residents. KOLON Industries will prevent environmental pollution as there is an increasing social interest in air pollutants such as fine dust. In particular, the company is installing air pollutant prevention facilities and strengthening emission status monitoring at all business sites.

| Management of environmental impact in production process |                    | Unit | 2016      | 2017      | 2018*     |
|--|--------------------|------|-----------|-----------|-----------|
| Water  | Water usage        | ton  | 4,508,081 | 4,520,777 | 4,480,677 |
|  | Recycled water     | ton  | 1,850,061 | 2,323,483 | 2,060,594 |
| Raw materials  | Raw material usage | ton  | 876,662   | 930,370   | 927,009   |
|  | Generated waste    | ton  | 40,537    | 51,437    | 53,564    |
| Wastes   | Recycled waste     | ton  | 28,662    | 39,074    | 41,027    |
|  | NOx                | ton  | 148.3     | 111.5     | 132.0     |
| Air pollutants   | SOx                | ton  | 45.1      | 31.4      | 27.2      |
|  | PM                 | ton  | 18.1      | 17.4      | 21.2      |

\* Data of the head office were included for 2018.

## Eco-Friendly Businesses

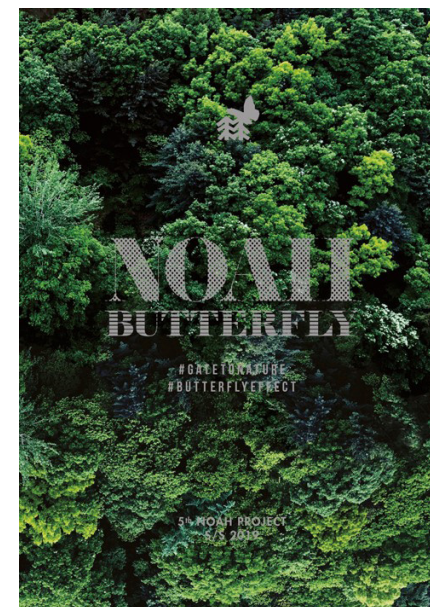
KOLON Industries breaks away from environmental management that simply reduces environmental pollution caused by production and business activities and operates eco-friendly businesses that accounts the ultimate environmental impact of products.



**Development of Hydrogen Vehicles** KOLON Industries leads the market for the hydrogen vehicle market, which is drawing attention as an alternative mode of transportation in the era of the climate crisis. The company built the foundation for growth of the domestic hydrogen vehicle market by developing and acquiring businesses related to hydrogen fuel cells since 2006. At following such efforts, KOLON Industries signed an MOU with the Ministry of Trade, Industry and Energy and the Ministry of Environment in November 2018 to demonstrate hydrogen electric buses in six cities across Korea since 2019. In addition, a special-purpose company for hydrogen charging stations called HyNet was founded in March 2019 with 13 leading hydrogen-related companies including Korea Gas Corporation. Through its participation in HyNet, KOLON Industries plans to build 100 hydrogen charging stations by 2022 and expand the infrastructure for domestic hydrogen vehicle supply.



**Up-Cycling Fashion** The FnC Organization launched 'RE;CODE' in 2012 as an up-cycling fashion brand that recycles clothing stocks. Immeasurable clothing stocks occurs each season due to the fast fashion trend. Since stocks are generally incinerated in about three years, the environmental destruction has come to the fore as a sustainability issue of the fashion industry. RE;CODE turns clothes that had been in stock for three years into new products (Inventory Line). The brand recycles military supplies such as military uniforms and parachutes (Military Line) or transforms industrial materials like airbags and car sheets into clothes and accessories (Industrial Line). This brand is well received by consumers who sympathize with the environmental issues and sustainability.



**Animal Welfare and Biodiversity** 'KOLON Sports' is an outdoor lifestyle brand of the FnC Organization of KOLON Industries that sells down products (some of them) with the Responsible Down Standard (RDS) certification. The RDS certification is granted for 'ethical down' considering the welfare of animals such as geese and ducks throughout the entire process, from the production of down to distribution. 'HEAD' is another brand of the FnC Organization that launched the 'Reversible Eco Down Jumper' using filling materials made of synthetic fiber instead of real duck-down.

On the one hand, KOLON Sports has been continuing the 'Noah Project' for four years as a social movement campaign to protect endangered animals and plants in Korea. In this project, KOLON Sports launches products using endangered species of Korea as motifs and donates a portion of its profit to support the protection of animals and plants. There are ongoing attempts to drive practical changes by calling for the interest of consumers and public with music and music videos through collaboration with music artists.



DMA 02

# Safe and Sound Business

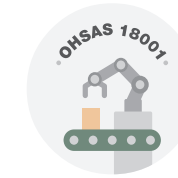
The chemical industry can cause tremendous damages to the local communities, from environmental destruction and damage to human life due to chemical accidents if the production process is not managed strictly. Chemical accidents have an adverse impact on a company by causing safety accidents, damaging of the corporate image, product defects, and financial losses. Therefore, companies must create a safe work environment, minimize the environmental burden through strict control of chemicals and contaminants, and guarantee the health right of employees. As people are paying greater attention to industrial disasters, safety accidents of suppliers, and product safety, it is necessary to manage the safety of employees, suppliers, and throughout the life cycle of products.

## 2018 Our Performance



**Achieved Grade P**

Process Safety Management (PSM)  
Gumi, Ulsan, and Daesan



**53.3%**

OHSAS 18001 certification  
Domestic and overseas manufacturing sites  
\* including ISO 45001, in 2019



**50%**

KOSHA 18001 certification  
Domestic manufacturing sites



**32.71 hours**

Safety education per person

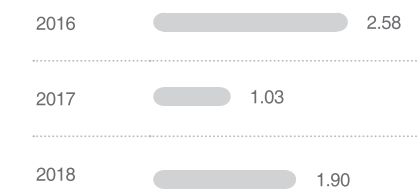


### Approach of KOLON Industries

Domestic and foreign regulations on chemical substances are strengthening. KOLON Industries is reacting proactively by regarding safety and health management as the foremost task. To establish a leading safety and health management system, KOLON Industries embodies accident business sites through periodic safety education and diverse safety and health activities for employees. Some of the business sites obtained the ISO 45001 certification (safety and health management system). In addition, KOLON Industries supports risk assessment guidance for suppliers, safety education for supervisors, and financing of safety and health management expenses. In particular, the company finds and improves on risk factors by 100% acknowledging of risk assessment performed by suppliers. Some business sites participated in the 2018 symbiosis and cooperation program and received Grade A (top 10%).

### Performance Measurement

LTIFR (Lost-Time Injuries Frequency Rate)\*



\* Calculation: (Number of lost time injuries/Employee total hours worked)×1,000,000

# Safety and Health Management

KOLON Industries prioritizes the safety and health of employees and partners. The company promises safety and health management according to the 'ESHQ\* Management Policy' and has established about 70 internal regulations. Safety and health management regulations of each business site are managed more effectively by reflecting characteristics of each site in determining the safety and health management organization, education, training, management, and inspection.

\* ESHQ: Abbreviation for Environment, Safety, Health, and Quality

**Management of Hazardous Chemical Substances and Work Manual** KOLON Industries has a work manual for handling hazardous chemical substances, which quickly reflects changes in relevant regulations and standards. In addition to the chemical substance management regulation, there are detailed manuals for transportation and disposal. First off, transport regulations include the harmful substance transport regulation, non-conformity management regulation, and harmful substance packing regulation. Safety checklists are inspected when loading and unloading harmful substance. The disposal stage is managed by focusing on the reduction of wastes and prevention of leakage. There are processes to reduce, recycle and reuse hazardous wastes. Internal chemical classification and labeling systems are used for storage. Safety materials are translated for employees in overseas business sites and foreigners. Work manuals are distributed in English, Vietnamese, Spanish, and Chinese, and any revisions and changes are shared quickly and accurately.

**REACH (Registration, Evaluation, Authorization and Restriction of Chemical)** REACH is a chemical substance management system of the EU that requires all chemicals manufactured or imported over 1 ton per year to be registered, evaluated, permitted, or restricted according to the amount in circulation and degree of hazard. This may include any mixtures and finished products that contain chemical substances. This not only affects companies within EU but external companies that export corresponding substances to the EU. The registration of chemical substances with the ECHA started in 2010, and all chemical substances used in exported products have been registered by 2018. KOLON Industries thoroughly registers chemical substances of suppliers and strictly manages them using the chemical substance management system.

## Occupational Safety and Health Committee

KOLON Industries has installed and is operating the Labor-Management Occupational Safety and Health Committee according to relevant laws and collective agreement regulations. The Occupational Safety and Health Committee comprises 9 company representatives and 9 labor representatives. The Occupational Safety and Health Committee manages health and work environment of all workers, establishes industrial accident prevention plans, and enacts and revises safety and health regulations by reflecting opinions of field employees.

\* Labor representatives of the Occupational Safety and Health Committee gather opinions from employees of KOLON Industries and suppliers, and all decisions also apply to executives.

## Safety and Health Management Certifications

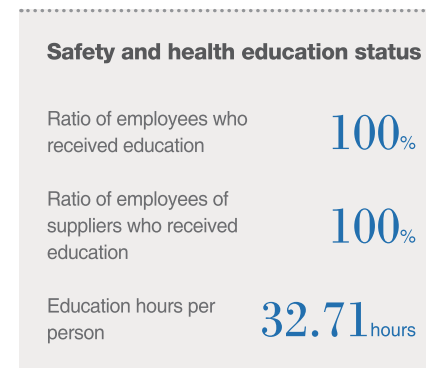
KOLON Industries promotes process safety management in each business site. In particular, the Gumi Factory conducts the joint labor-management inspection at least once a month and makes efforts to maintain Grade P for data and field verification. Risk assessment has been standardized to identify potential risks in new, changed, and existing facilities for each process. Assessment results are classified into five grades, and countermeasures are must be taken about processes and facilities that receive one of the top three risk grades. KOLON Industries established the safety and health management system and obtained the OHSAS 18001 and KOSHA 18001 certifications. In 2019, 53.3% of domestic and overseas manufacturing sites obtained the OHSAS 18001 (including ISO 45001) certification and 50% of domestic manufacturing sites obtained the KOSHA 18001 certification.

## Safety and Health Education for Employees and Suppliers

KOLON Industries conducts various education programs to inspire safety and health awareness of employees and form a company-wide bond of sympathy. Common education programs on the Chemical Substances Control Act, Occupational Safety and Health Act, harmful and dangerous work environment management, and health enhancement are planned out and executed once a month in each business site. There are personalized education programs for each work and in-depth education programs for managers. In 2018, the company conducted safety education on forklifts, dangerous article safety managers, firefighting safety managers, and health managers. The company hosts ESH quiz contests to help understand educational contents, and contest winners receive a plaque and monetary reward.

Both employees of KOLON Industries and residing employees of suppliers receive safety and health education. Collective education of chemical substance managers and online education of the National Institute of Chemical Safety educate responses and first-aid measures to chemical accidents, and such programs are reported to the National Institute of Chemical Safety under the Ministry of Environment. Newsletters share social and environmental issues of suppliers to constantly enhance safety and health awareness.

# Diffusion of Safety and Health Culture



| Contents of legal education     |  |                                    |  |
|---------------------------------|--|------------------------------------|--|
| Chemical Substances Control Act | <ul style="list-style-type: none"> <li>Standards for handling hazardous chemical substances</li> <li>Indication of hazardous harmful chemical substances</li> <li>Personal protective equipment of persons handling chemicals</li> <li>Installation and operation of facilities</li> <li>Preparation for and response to chemical accidents</li> </ul> | Occupational Safety and Health Act | <ul style="list-style-type: none"> <li>Preparation and compliance with safety and health management regulations</li> <li>Safety and health measures</li> <li>Compliances of workers</li> <li>Suspension of work</li> <li>Technical guidelines and standards for work environment</li> <li>Autonomous safety check</li> <li>Autonomous inspection program</li> <li>Measurement of work environment</li> </ul> |



## Safety and Health Prevention and Improvement Activities

**Emergency Training** KOLON Industries has secured its own firefighting facilities and workers to prepare for emergencies like fire and accidents. The company conducts training at each business site and joint training among all business sites to protect the safety of employees and production facilities. There are emergency response scenarios and organizations prepared to cope with situations outside business sites such as transportation. In 2018, Gyeongsan Factory formed the 'Chemical Safety Community' with agencies and enterprises in Gyeongsan to establish a chemical accident prevention and response system.

In addition, KOLON Industries hosts risk prediction training contests to discover latent risk factors at work and find methods of prevention. These contests not only help increase safety awareness of employees by actively finding risks at work but also contribute to the practical prevention of danger.

**Safety Inspection** All business sites of KOLON Industries conduct regular environmental, safety, and health inspection activities. Factory managers supervise periodic 'top environmental, safety, and health diagnosis'. Safety elements of each process are inspected to prevent unexpected safety and health accidents in the production process. Employees at business sites voluntarily filled out a safety questionnaire to establish the 'Safety Golden Rules'. These rules are always kept behind the employee card to remember and practice them at all times.

In April 2019, Gimcheon Factory conducted safety inspection to prevent fatal manufacturing accidents by promoting the diffusion of safety culture and focusing on the safe handling of heavy weights. Gumi Factory was selected as an exemplary case of the chemical factory maintenance by the Korea Occupational Safety and Health Agency in 2018, sharing leading safety inspection and improvement activities.

**Safety Equipment** KOLON Industries provides adequate protective equipment to field workers such as safety goggles, earplugs, and safety helmets in accordance with relevant laws and internal safety and health management regulations. The safety protective equipment matrix informs workers about equipment to be worn during each work, guiding them to wear adequate protective equipment. The Korea Occupational Safety and Health Agency offers a safety experience to teach the importance of wearing protective equipment and proper method of wearing. When educating new employees, KOLON Industries trains how to wear safety protective equipment and use fire extinguishers. Emergency equipment is inspected monthly, and any problematic equipment are replaced immediately.



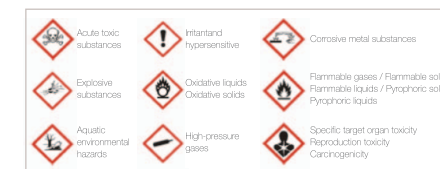
### 2017 Ulsan Factory Grade A

Safety and health cooperation program of parent company

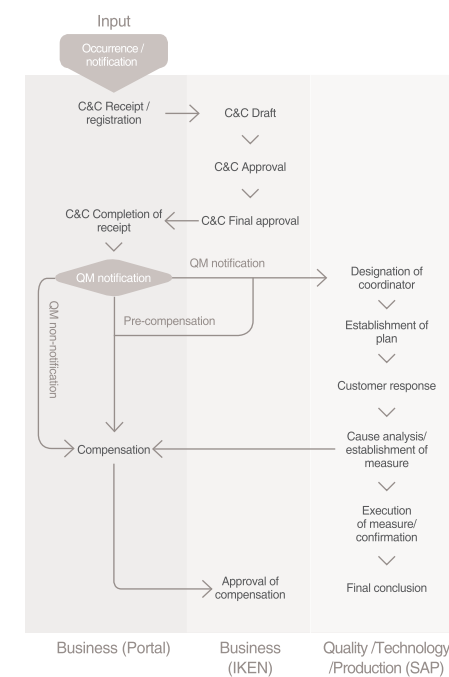
\*exempted in 2018

## Responsible Production

### GHS warning signs



### C&C process



## Quality Management System

**Fool-Proof System** Products of a chemical and material company determine the quality of final products and are directly linked to the safety of products. KOLON Industries has implemented a fool-proof system to set up quality management goals, prevent mistakes automatically, and lower the defect rate.

**GDI (Goal Driven Innovation)** GDI is a unique quality innovation activity of KOLON Industries started in 2012, designed based on the Goal-Question-Metric (GQM) 4.0 model. The company inspects the management system of the head office and quality management level through GDI. Any problems found are managed as tasks. The technology system and process based on GDI have been expanded from early production/technology sectors to research and office sectors in 2017. KOLON Industries also conducts substantial education programs to foster talented engineers such as the GDI engineer training course. In 2019, 358 employees participated in in education/training.

## Information Provision and Feedback Procedure

**Management of Material Safety Data Sheet (MSDS)** MSDS refers to a sheet of data that contains name of a chemical substance, safety and health precautions for handling, fire and explosion safety, physical and chemical properties, carcinogenicity, and environmental impact in relation to importing, using, transporting, and storing the chemical substance or a product that includes the chemical substance. KOLON Industries furnishes MSDS at each business site to ensure the safety of employees and educates employees on chemical substances, risks, hazards, and precautions for handling. To fulfill product responsibility, the company provides MSDS for any chemical substances sold and redistributes updated MSDS whenever relevant information is revised.

**Use of Chemical DB to Secure Safety** KOLON Industries uses the SERC DB of KOLON Chemical Management System (KCMS) included in the ERP system of SAP to preview and secure the safety of chemical substances in the product development stage. The SERC DB includes regulatory information of about 250,000 chemical substances in 57 nations around the world, and the DB is updated periodically to check safety information.

**Customer C&C** KOLON Industries has consistently improved quality by engaging in various improvement activities such as the international initiative response, quality monitoring, and GDI activity. As a result, the external non-conformity rate has been decreasing for three consecutive years. The non-conformity rate was decreased by 18.4% in 2018 compared to 2017. The company responds to claims of customers through the C&C process.



DMA 03

# Respecting and Respected Workplace

With the broadening of social influence and business areas, the demand for human rights protection and respect of companies is expanding to diverse fields and regions. The efforts of companies to respect human rights have turned into international standards such as the Universal Declaration of Human Rights, Ten Principles of the UN Global Compact, and ILO Core Conventions. In particular, it is essential for KOLON Industries to comply with the international human rights conventions and standards because it is operating business sites in different places around the world, including Vietnam and Mexico. Since human rights risks can lead to financial loss, losing consumer trust, and ruining of corporate image, it is necessary to manage human rights throughout the value chain.

## 2018 Our Performance



**Grand Prize**

The Korea Labor-Management Cooperation Award



**100%**

The ratio of domestic business sites with human rights impact assessment



**100%**

Ratio of employees who received human rights education (Korea)  
\* Completed by all employees except for persons on leave



**3.53 points**

Satisfaction of employees

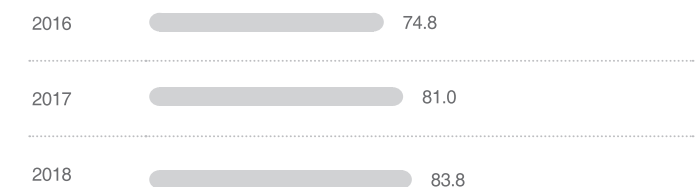


### Approach of KOLON Industries

KOLON Industries makes diverse efforts to prevent and manage the possibility of human rights infringement throughout its business activities, from the supply of raw materials to production. After the declaration of the human rights charter in 2018, the company established the human rights policy and conducted a human rights impact assessment on all domestic business sites in 2019. After the human rights impact assessments, the rights of employees and protection of minority groups were strengthened by revising related regulations to solve potential risks and problems and to increase the level of human rights. Human rights issues were included in the CSR diagnosis of partners since 2018 to actively manage human rights issues and the potential risks of suppliers. In addition, KOLON Industries prevents indirect human rights infringements by preventing the use of raw materials that correspond to responsible minerals.

### Performance Measurement

Equal pay between male and female in managerial position (unit: %)





# Human Rights Management

## Human Rights Management Policy

KOLON Industries recognizes the importance of human rights and aims to attain the value of respect in management activities. The declaration of human rights was enacted in 2018 as the basic policy to respect the human rights of all employees and stakeholders. This declaration contains the principle of respect for human rights of employees, suppliers, customers, and local communities based on international standards such as the UN Human Rights Charter, UN Guiding Principles on Business and Human Rights (UNGPR), and ILO Labor Convention. The entire text of the declaration of human rights is disclosed on the website of KOLON Industries.

### Human Rights Declaration of KOLON INDUSTRIES, INC.

#### KOLON INDUSTRIES, INC. Declaration of Human Rights Management

KOLON INDUSTRIES, INC. fulfills its social responsibility and contributes to the formation of a positive relationship with stakeholders and the creation of social values. The company aims to maintain a win-win relationship with employees, suppliers, customers, and local communities based on trust and to respect the basic rights of all stakeholders.

KOLON INDUSTRIES, INC. supports the 'UN Universal Declaration of Human Rights' presented as the human rights principles and the 'Framework and Guiding Principles on Business and Human' of the UN Human Rights Committee. The company tries to consider human rights in all business areas including human resource management of employees, relationship with suppliers, customer reception, and relationship with local communities.

KOLON INDUSTRIES, INC. declares human rights management as below to respect and protect the human rights of all stakeholders.

- **Human rights of employees**

We respect the diversity of all people in the recruitment, evaluation, remuneration, and education of employees and prohibit discrimination against gender, age, race, disability, religion, political inclination, and place of birth.

We comply with all labor principles related to health, safety, and working hours recommended by the International Labor Organization (ILO) and ratified by the government and prohibit child labor and forced labor.

- **Human rights of suppliers**

We regard human rights in all contracts, investments, transactions, and business activities.

- **Human rights of customers**

When responding to customers, we prohibit discrimination against gender, age, race, disability, religion, political inclination, and place of birth, only require minimal personal information according to laws, and place utmost efforts to prepare and operate a system and procedure for protecting customer information.

- **Human rights of local communities**

We strive to enhance the human rights of local communities at home and abroad.

September 10, 2018

CEO and President of KOLON INDUSTRIES, INC. Hee-Goo Jang

## Human Rights Management System

KOLON Industries appointed the executive in charge of legal affairs as the general human rights manager to internalize human rights management and identified human rights risks in response to changes in domestic and foreign laws related to human rights by assigning Legal Affairs / Compliance Team as the supervising department. The human rights management system of KOLON Industries is strengthened by enacting and revising internal regulations. Discrimination was explicitly prohibited by revising the personnel system in 2018, and human rights management was applied throughout the business value chain by establishing the human rights policy in 2019. KOLON Industries will consider introducing human rights impact assessments, human rights relief procedures, and internal audit on human rights to further enhance human rights systems.

### Human Rights Policy of KOLON Industries

#### 1. Principles

KOLON INDUSTRIES, INC. respects and protects the human rights of all influenced stakeholders including employees, customers, suppliers, and local communities. The company respects and protects the basic human rights specified in various international human rights standards (guidelines hereafter) such as the UN Universal Declaration of Human Rights, UN Global Compact, UN Guiding Principles on Business and Human Rights, OECD Guidelines for Multinational Enterprises, UN Convention on the Rights of the Child, labor principles recommended by the ILO and ratified by the nation, and laws of each nation.

#### 2. Operating Guidelines

|   |   |
|---|---|
| Humanitarian treatment                  | We respect employees and try to create a safe working environment where is free of inhumane treatment or threats such as mental or physical oppression and verbal violence.   |
| Prohibition of forced labor             | We do not restrict mental or physical freedom nor do we force labor against the will of employees. We do not require submission of an ID card, passport, or labor certification issued by the government.   |
| Prohibition of child labor              | We comply with the minimum employment age of each nation and region and prohibit child labor of children below 15 years of age. Minors aged below 18 years are employed while complying with labor relations and laws, making sure that they do not perform dangerous or hazardous duties.          |
| Prohibition of discrimination           | We provide equal opportunities for employment, promotion, reward, and disciplinary action to all employees and applicants. We do not discriminate against race, gender, age, the region of birth, educational background, religion, marital status, political view, social status, or disabilities. |
| Labor hours                             | We comply with national and regional regulations for regular working hours, overtime working hours, and holidays.   |
| Wage and labor conditions               | We comply with wage and labor conditions in each nation and region such as minimum wage and overtime allowance.   |
| Freedom of association                  | We guarantee freedom of association and the right to collective bargaining in each nation and region. We do not take disadvantageous actions against the formation, joining, and activity of labor unions.  |
| Protection of human rights of residents | We must respect and protect the right to life, freedom of movement, safety rights, and property rights of residents in business places.   |
| Protection of environmental rights      | We must adhere to the principle of the preventive approach to prevent residents in business places from suffering various grievances such as hazardous substances and noise, providing the means to relieve affected individuals or groups.   |

# Respect for Human Rights of Employees

## Ratio of employees who received human rights education

\* Completed by all employees except for persons on leave

100%

## Equal social employment status

Female managers 11.8% 83 persons

Employees with disabilities 1.4% 38 persons

## Prohibition of Discrimination and Respect for Diversity

KOLON Industries stipulates the prohibition of discrimination against gender, age, race, disability, religion, political inclination, and place of birth in its declaration of human rights and personnel regulations such as employment rules. The company respects diversity by approaching the entire process from recruitment to evaluation, remuneration, and education from the perspective of equal opportunities and fair outcomes.

KOLON Industries consistently recruits female workers, and there are no differences in wages between men and women when all other conditions are the same. The company has implemented a mentoring program for women in 2006 to help female employees find their role models at work. In addition, KOLON Industries prepared a women's lounge and introduced a family welfare system so that pregnancy and childbirth do not become reasons for career breaks. The ratio of female employees was increased to 10.6%, and the ratio of female managers to 11.8% in 2018. The FnC Organization was acknowledged for such efforts in 2018 and awarded for human resource management at the '3<sup>rd</sup> Asian Female Index Awards' held in 2018.

There are continuing efforts for equal recruitment of disabled people and local talents. Despite many production workers, the employment rate of disabled people was 1.4% in 2018. An exclusive parking space and restrooms were installed for the employees with disabilities to increase their convenient, constantly striving to increase employment.

## Human Rights Impact Assessment

Human rights impact assessment was conducted on all business sites in 2019. Assessments identified the impact of human rights as well as risks in 10 areas (suppliers, supply chains, local communities, prohibition of child/forced labor, etc.) based on the HRIAM Guide and institutional human rights impact assessment of the National Human Rights Commission of Korea. KOLON Industries has created a cooperation system to take relief measures when the risks of child labor and forced labor are discovered through assessment. Wage monitoring is conducted for fair employment and remuneration. The company supports groups that are susceptible to having their human rights infringed by identifying various factors, and any problems are improved on by enacting and revising relevant regulations.

## Human Rights Education

Employees receive human rights education to prevent discrimination. Legal duty education programs such as sexual harassment prevention and improved disability awareness are in place. Along with the Human Rights Charter, KOLON Industries conducts education on child/forced labor and harassment under the 'Workplace Harassment Prevention Act' to increase the satisfaction and effectiveness of education by reflecting domestic and foreign environments on topics. KOLON Industries will establish a culture of respect for human rights by cultivating sensitivity towards human rights among employees through diverse human rights education programs.

# Fair Employment and Employment Relationships

## Grievance of Employees

KOLON Industries responds promptly to human rights infringement against employees by operating an online grievance system. Employees can apply for grievance counseling and report damages through the online channel anonymously, and only the persons in charge of the relevant department can access reported information to protect reporters. On the one hand, a grievance office comprising one person each from labor and management is in operation according to the Labor-Management Council Operation Regulations. Grievance officers shall provide notice of the measures taken to workers within 10 days after receiving a report.

## Transparent Recruitment

KOLON Industries creates quality jobs and guarantees fair job opportunities. The company's Personnel Regulations were reorganized in 2019 to prohibit discrimination against race, sex, religions, etc. The company conducts a blind interviews for recruitment to rule out information irrelevant to jobs such as gender and educational background. In addition, KOLON Industries provides education for interviewers to prevent corruption in employment and human rights infringement during interviews. On the one hand, the company discloses its recruitment announcements, job information, and recruitment process on the website to prevent an imbalance of information according to educational background and region. The fair recruitment process leads to the diversity of employees. Out of 186 newly recruited employees in 2018, 48.9% (91 persons) were local talents, increased by 13.6%p compared to the previous year.

Furthermore, KOLON Industries prohibits child labor of children aged below 15 years and forced labor in domestic and overseas business sites through the declaration of human rights and Personnel Regulation under the ILO Conventions and UN Global Compact.

## Labor-Management Communication and Win-Win

KOLON Industries guarantees freedom of association so that employees can organize and join labor unions. The ratio of employees who joined the labor union is 53.5% as of 2018, and the ratio of workers subject to collective negotiation of the labor union is 55%.

KOLON Industries operates the Labor-Management Council to build a constructive relationship and enable smooth communication of labor and management. The Labor-Management Council, comprised of each five representatives of management and labor, discusses matters such as the safety and welfare benefits of workers. The satisfaction score given by employees about labor-management communication was 3.53 points in 2018.

Based on the efforts to establish a stable relationship between labor and management, there has been none of labor dispute under the banners of 'Win-Win Companionship' and 'Win-Win One Body' since 2007. In addition, the company declared tripartite-labor management and government- practice of social responsibility in 2016 and is spreading win-win energy of labor and management. These efforts were acknowledged externally with the Silver Tower Industrial Medal in 2014, Prime Minister's Citation in 2016, and Grand prize at the 'Korea Labor-Management Cooperation Awards' in 2018.





# Human Resource Management

## Assessment and Rewarding

KOLON Industries offers equal opportunities and motivates employees through a transparent performance assessment system. Performance assessment, including goal achievement, work difficulty, and contribution, is conducted regularly on regular workers once a year. In 2018, 88.3% of target employees (2,399 persons) were assessed. Since periodic assessment provides the basis for major personnel transfers such as job transfers and promotions, KOLON Industries operates an appeal system after notifying the personnel assessment results to increase the fairness of the assessment.

The company has designed and follows an organized wage system so that employees can be rewarded for their performance. The cumulative salary system determines salary of each individual according to the performance assessment grade of the previous year for general/research section managers and higher. Employees with higher performance can receive a higher salary than those in higher positions. In addition, a standard salary table is applied to general/research assistant managers and lower, ordinary jobs, functional jobs, and special service jobs to prevent unfair discrimination against gender and age.

## Fostering Talents

KOLON Industries supports employees, the most important assets of the company, to grow and develop in various ways. The company devises annual education plans by analyzing the satisfaction and needs for programs conducted during the previous year and the results of an HR trend survey. This makes it possible to provide a variety of personalized education programs according to the different duties and positions of employees.

**Leadership Reinforcement Program** Horizontal communication within the organization is becoming important, and the focus of leadership is shifting from work management to human beings and participation. Following such trends, KOLON Industries fosters flexible leadership by adding debates and practical exercises to existing programs. The company has improved its direction to strengthen communication-based leadership of the field manager course.

**Personal Competency Development Program** KOLON Industries helps individuals reinforce their competency by providing diverse education programs for each position and field including sales, production, and research. To accommodate the needs of employees, the company considers hands-on utility of education programs.

There are 11 job training courses for sales, research, and production to increase basic work competencies, and an internal MBA course is in operation to increase thinking and expertise of section managers. Manager leadership education is conducted for promoted individuals to foster leadership in employees. In addition, the One-person, One-license program increases expertise of individuals, and the mobile learning platform helps improve competency of employees by learning at any time and place. KOLON Industries also fosters candidates for overseas resident employees and train talented individuals with various foreign language lectures for global expansion.

### Investment in education of employees

Investment in education

KRW 1,858,856,000

|      | Maternity leave | Rate of return after maternity leave |
|------|-----------------|--------------------------------------|
| 2016 | 19 persons      | 94.7%                                |
| 2017 | 27 persons      | 81.5%                                |
| 2018 | 24 persons      | 100.0%                               |

## Welfare Benefits

**Family Friendly System** KOLON Industries makes various institutional efforts to create a culture that finds the balance of work and life. Working hours for pregnancy has been extended by four weeks compared to the legal requirement to help pregnant employees. They are considered and protected by providing congratulatory gifts and an exclusive employee card and operating an exclusive parking space. 'Magok KOLON Daycare Center' is operated in the head office in Magok to facilitate childcare for employees. Shortened working hours for parenting and family care leave system are in place. The company also provides subfertility leave and operation expenses. Through such efforts, KOLON Industries aims to minimize the career breaks of female employees and maximize the ability of excellent female workers.

Employees leave work early on the third Friday of every month to spend the evening with family members. With the changing labor conditions such as the legislation of 52-hour workweek and pursuit of work-life balance, KOLON Industries continuously reduces unnecessary extended/night working hours through monitoring of working hours based on the pre-approved process. In addition, 'KOLON Family Love Fund' voluntarily created by employees offers financial support for employees or families of employees who suffer an unexpected injury or disease.

**Expanded Work Flexibility** KOLON Industries has been operating the flexible working hour system and staggered office hour system since July 2018. The flexible working hour system flexibly adjusts working hours when continuity of work is necessary or duties are concentrated on a specific time. The staggered office hour system adjusts working time based on the 8-hour workday for childcare, treatment of diseases, schooling, and long-distance commuting. The company creates an environment for increased work commitment of employees and increases the efficiency of work.

**Healthcare Program** KOLON Industries conducts annual health checkups on all employees and their spouses. Checkups can discover diseases in the early stage and prevent them. In addition, employees are helped to form healthy habits. Health Tron (exercising chair) and employee-only fitness center are available so that employees can take a rest in the middle of a busy day. The fitness center is available before and after working hours, and free one-point lessons are welcomed by employees. There are other obesity and smoking control programs in operation.





**DMA 04**

# Reliable Business Management

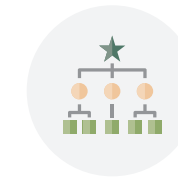
Ethics management and the sound organizational culture of companies are becoming increasingly important with increasing social interest in economic, legal, and ethical responsibilities. Management of non-financial indicators such as ethics management, compliance, and transparent governance is more important because of legislations for social values and the implementation of the Stewardship Code by the National Pension Service. The importance is constantly increasing at home and abroad due to various international conventions on corporate ethics and the enactment of laws in OECD nations. Ethics management is now a requirement, not an option, for securing competitiveness in domestic and overseas markets. It is time to construct ethics management and sound organizational culture to gain the trust of consumers and attain sustainable growth.

## 2018 Our Performance



**100%**

Ratio of business sites that receive internal audit on corporate ethics



**Grade B+**

Korea Corporate Governance ESG Evaluation



**99%**

Ratio of employees who received education of information security



**98.34 points (AAA Grade)**

AEO Certification Grade 2016 3<sup>rd</sup> quarter~2018 2<sup>nd</sup> quarter

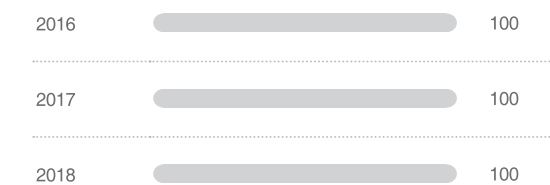


### Approach of KOLON Industries

To respond proactively to such social demand, KOLON Industries reorganized relevant regulations and systems after the formation of a new ethics management organization in 2005. The company complies with the Code of Ethics and ethics guidelines for employees revised in 2017. Online and offline ethical education programs are conducted to ensure that all employees perceive ethics management as an essential part of a sustainable company. In addition, compliance newsletters are sent out to employees of KOLON Industries, and internal suppliers to strengthen ethics management throughout the business value chain. KOLON Industries will continue to comply with the Code of Ethics and guideline, solidifying and supplementing the ethics management system.

### Performance Measurement

Coverage of the Code of Ethics for employees (Unit: %)





# Governance

## Composition of Board of Directors

The Board of Directors is the highest decision-making organization of the company that deliberates on important management and financing affairs according to the articles of association and Board of Directors regulations. It comprises three inside directors and four outside directors. The Board of Directors operates three committees including the Audit Committee, Management Committee, and Outside Director Candidate Nomination Committee. The Audit Committee only comprises outside directors, including the Chairman, and guarantees independence to supervise the duties of directors and the management related to business management and accounting.

| Composition of the Board of Directors | Name           | Gender | Position   | Area of Expertise                  |   |
|---------------------------------------|----------------|--------|--|------------------------------------|---|
| Inside director                       | Hee-Goo Jang   | Male   | Chief Executive Officer, President<br>Chairman of the Board of Directors | Corporate management               |   |
|                                       |                |        | Chairman of the Outside Director Candidate Nomination Committee          |                                    |   |
|                                       |                |        | Chairman of the Management Committee                                     |                                    |   |
| Outside director                      | Cheol-Su Kim   | Male   | Member of the Management Committee                                       | Accounting, financing              |   |
|                                       |                |        | Min-Tae Kim  | Member of the Management Committee | Accounting, financing   |
|                                       |                |        | Han-Ju Yoo   | Chairman of the Audit Committee    | Quality management  |
| Outside director                      | Chang-Hwan Joo | Male   | Member of the Audit Committee  | Material technology                |   |
|                                       |                |        | Member of the Outside Director Candidate Nomination Committee            |                                    |   |
|                                       |                |        | Tae-Hee Kim  |                                    | Member of the Outside Director Candidate Nomination Committee |
|                                       | Je-Won Lee     | Male   | Member of the Audit Committee  | Accounting, financing              |   |

\*As of June 3, 2019

## Director Appointment Process

Directors are appointed at the shareholders' meeting, fairness and objectivity of appointment are secured through a lawful process. Candidates for inside directors are previewed and finalized by the Board of Directors and appointed at the general meeting of stockholders. Candidates for outside directors are selected by the Outside Director Candidate Nomination Committee, finalized by the Board of Directors, and appointed at the general meeting of stockholders. Two out of three members of the Outside Director Candidate Nomination Committee of KOLON Industries are outside directors, fulfilling the regulation under Article 542-8 of the Commercial Act that the majority of members shall be outside directors. Candidates for outside directors shall satisfy the qualifications required in relevant laws and the articles of association, have expertise in the primary business areas of the company, and be able to supervise the management of the company in an independent standing without an important interest relationship with the company. There are no qualifications related to race, nationality, gender, place of birth, and religion.

### Criteria for selecting candidates for outside directors

|              |  |
|--------------|--|
| Independence | Relative or business relationship with the largest shareholder and major shareholders of the company               |
| Expertise    | Professional knowledge and experience in business management, experience as an inside director or outside director |
| Diversity    | Diversity of gender, age, nationality, race, and ethnicity   |
| Lawfulness   | Disqualifications according to the Commercial Act and articles of association                                      |

## Board of Directors and Operating Status

Under the Board of Directors regulations, the Board of Directors is held periodically once a quarter and temporarily whenever necessary. The Board of Directors was held 13 times (four regular meetings and 9 temporary meetings) in 2018. Details on the operating status of the Board of Directors are as presented below.

| Operating status of the Board of Directors | Unit | 2016  | 2017  | 2018  |
|--|------|-------|-------|-------|
| Board of Directors meetings called         | Case | 18    | 17    | 13    |
| Agendas deliberated                        | Case | 25    | 28    | 25    |
| Participation rate of outside directors    | %    | 87.4  | 90.6  | 92.3  |
| Participation rate of outside directors    | %    | 73.60 | 72.10 | 61.50 |

As of December 31, 2018



# Corporate Ethics

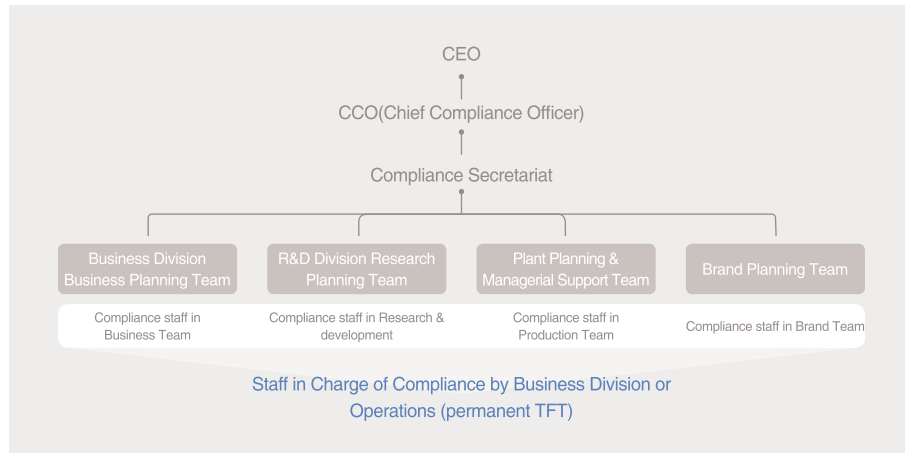
## Ethics Management Policy and System

The responsibility for and scope of ethics management are expanding with increasing social demand and legal standards for ethics management. KOLON Industries has reorganized various regulations and systems related to ethics and legal compliance management to create a fair and transparent ethics management system. The company prepared the groundwork for ethics management by establishing diverse policies, including the regulation on the contact of competitors, regulation on the prohibition of unlawful soliciting and bribery, and regulation on voluntary compliance with fair trading. In 2019, the ethical guideline for employees was revised to specify detailed items such as anti-corruption, internal transactions, conflict of interest relations, fraud, money laundering, and bribery.

**Ethics Management Governance** KOLON Industries appointed a Chief Compliance Officer(CCO) to achieve a more systematic ethics management and formed a triple CP organization comprising the compliance secretariat and compliance TF of each headquarters and business site. Each compliance TF executes duties related to the Monopoly Regulation and Fair Trade Act and Subcontract Act and frequently reports any compliance-related issues to the compliance secretariat or CCO. Apart from this, the Legal Compliance Team was newly organized besides the Ethics Management Office in 2011 to increase the internal expertise of ethics management and legal compliance management. The Ethics Management Office conducts periodic audits on the company, examines domestic and overseas trends of laws and systems, prevents various legal risks in advance, and operates the fair trade compliance program.

**Ratio of domestic business sites that received internal audit (related to corporate ethics)**

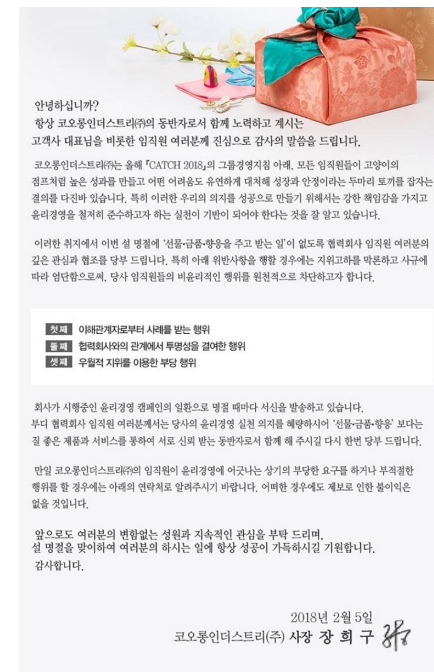
**100%**



### Report Channels and Measure on Violations

KOLON Industries takes reports on corruption and violation of employees, suppliers, and other stakeholders through the anti-corruption report channel on the group website and its online compliance report channel. The subjects of the report include bribery, receiving of money and valuables, acts of embezzlement and malpractice, unfair transactions with suppliers, disclosure of confidential information and customer information, another violations of the Code of Ethics. KOLON Industries protects corruption reporters, strictly maintains the privacy of reporters according to the compensation guideline, prevents reporters from receiving disadvantageous treatment, and executes compensation or responsibility exemption according to standards. When employees violate the Monopoly Regulation and Fair Trade Act, KOLON Industries imposes punishments such as a reprimand, caution, warning, or legal education based on the fair trade compliance reward and punishment regulation. In addition, the company grants award certificates, prizes, gifts, or vacations to informants, excellent compliers of each business division, and individuals who faithfully complete education on the Monopoly Regulation and Fair Trade Act.

| Status of disciplinary actions on violation of ethics management | Unit        | 2016     | 2017     | 2018     |
|--|-------------|----------|----------|----------|
| Receiving money and valuables, embezzlement, malpractice         | Case        | 1        | 0        | 1        |
| Violation of regulations   | Case        | 1        | 2        | 2        |
| Environment and safety accidents                                 | Case        | 3        | 4        | 1        |
| Sexual harassment and harassment at work                         | Case        | 3        | 1        | 4        |
| <b>Total</b>   | <b>Case</b> | <b>8</b> | <b>7</b> | <b>8</b> |



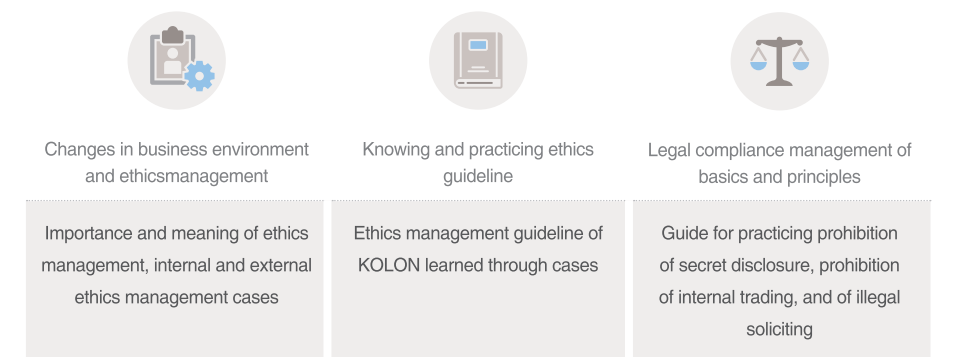
### Internalization of Ethics Management

KOLON Industries places various efforts such as the CEO's declaration of fair trading, ethics education, and compliance newsletters to increase company-wide interest in and awareness of ethics management. Ever since the Fair Trade Compliance Program was implemented in 2012, the company has been encouraging the company-wide practice of compliance through Compliance Day and CCO Interview Day. Based on the evaluation of the Fair Trade Compliance Program, KOLON Industries obtained Grade AA in the CP evaluation supervised by Fair Competition Federation under the Fair Trade Commission in 2015. The ethics management letter of the CEO is sent to all employees and suppliers on major national holidays every year to settle down a fair and transparent trade culture.

**Publication of Compliance Letters** KOLON Industries publishes monthly compliance letters for employees and suppliers, paying attention to the internalization of legal compliance management in employees and suppliers. Compliance letters increased the understanding and interest of employees and suppliers by presenting explanations and examples of the latest domestic and overseas laws and systems. In 2018, compliance risks were prevented in advance through compliance letters by sharing the prohibition of unfair management interference under the Subcontract Act, prohibition of unfair support among affiliates, prohibition of unfair acts under the Fair Agency Transactions Act, and precautions related to the Improper Solicitation and Graft Act.

**Conduct of Ethics and Compliance Education** KOLON Industries conducts customized education so that all employees can have solid ethics and legal compliance awareness. Ethics education was conducted online and offline to increase accessibility. In addition, diverse compliance education programs delivered legal knowledge and cases to be considered in actual business situations. In 2018, primary compliance issues were educated including compliance education for new employees, experienced employees, and compliance education on sales secrets and subcontracting.

#### Ethics education program





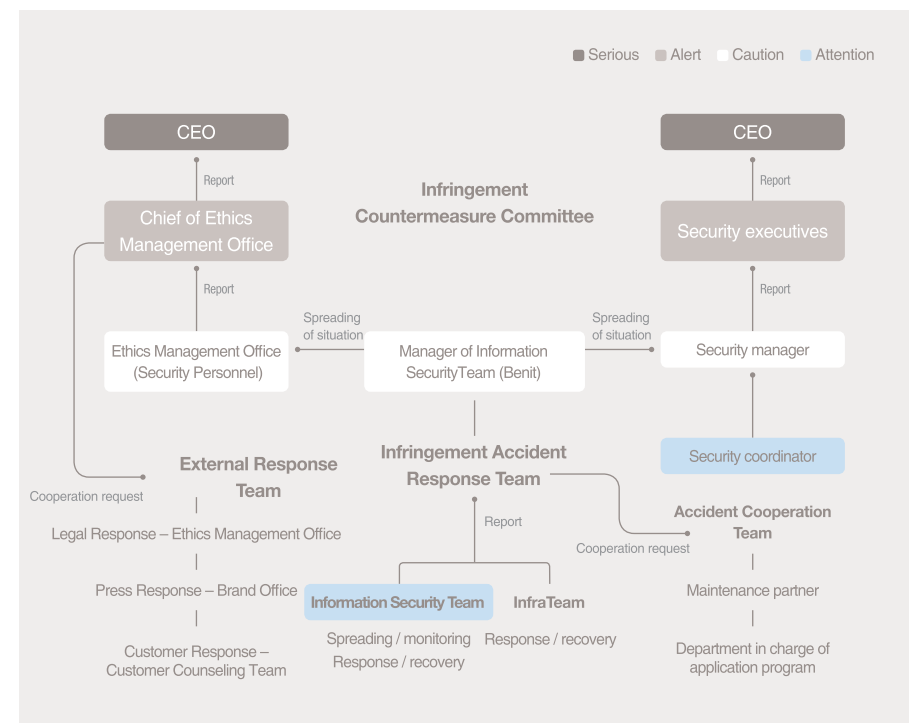
# Information Security

## Information Security Policy and System

KOLON Industries established policies such as the Security Management Regulation, Infringement Response Guideline, Personal Information Handling Policy, Document Management Regulation, and Business Secret Management Regulation to protect customer information, confidential information, personal information, and business secrets.

**Information Infringement Response Organization** KOLON Industries has established the Infringement Response Team based on IT/Security Teams to play the role of analyzing, responding, restoring, and reporting infringement situations. When an infringement accident is 'Alert' level or above, the Infringement Countermeasure Committee is called in response to the accident. The severity of infringement accidents is divided into Attention, Caution, Alert, and Serious. The response procedure was established for each step, and there are responses to different situations, including DDoS, web hacking, and malicious code. Based on such efforts, KOLON Industries achieved zero infringement accident in 2018.

**Infringement accident response organization chart**



**Management of Information Record Preservation Schedule** KOLON Industries has security executives and a security department in charge of information protection duties. Documents related to the company are destroyed after two years according to the Document Management Guideline, but confidential documents that require separate management are stored for 3, 5, 10, or 20 years. Confidential documents are destroyed by a professional company under thorough supervision of the person in charge.



**Information Protection Monitoring and Report Channel** KOLON Industries conducts two field inspections a year, checks information protection status using its audit system, and confirms compliance with the Personal Information Treatment Policy. Employees who violate information protection regulations can be subject to the disciplinary actions of the Personnel Committee. There were zero violation and zero disciplinary action in 2018. When they perceive an information infringement accident, all employees can report the accident through the reporting channel in real-time. Once a report is received, related departments handle the matter promptly according to the information protection risk response procedure.

**Response to information protection risks**



## Internalization of Information Security

KOLON Industries conducts education of information security every year to enhance the information security awareness of employees and improve their response capacity. Online education, newsletters, and invitation lectures are carried out on all employees twice a year, and 99% of employees completed them in 2018. Employees in charge are educated and trained to prepare for infringement accidents. Training is done based on infringement accident scenarios. And expected problems are derived from the education results and reflected on subsequent education. In particular, in response to the General Data Protection Regulation (GDPR) of the EU, KOLON Industries hosted a briefing session for export personnel of each headquarters and shared related guideline materials.

| Status of information protection education           | Education Contents   | Completion Rate (2018) |
|--|--|------------------------|
| Company security education (first half /second half) | Sharing of security policy and pending issues<br>Security threats and prevention guide | 99%                    |
| New and experienced employee education               | Security policy and procedure  | 100%                   |



DMA 05

# Progressive Corporate Citizen

Whereas the sustainability of companies in the past was limited to management activities and charity activities for the local community, it has been expanded to social responsibility for the overall supply chain and creation of shared values using corporate capability and influence. Besides global evaluations such as EcoVadis, Korea is consistently discussing the enactment of laws related to social values. Government projects demand that companies pay attention to various social values such as human rights, safety, environment, and win-win cooperation instead of simply pursuing economic values. Therefore, it is time for companies to manage social responsibility risks within the supply chain and engage in social contribution activities for Creating Shared Value (CSV).

## 2018 Our Performance



**0.43%**

Ratio of social contribution expense to operating profit



**3.8 hours**

Average volunteer hours per employee



**KRW 10.0 billion**

Win-win fund



**Satisfactory**

Shared growth evaluation grade

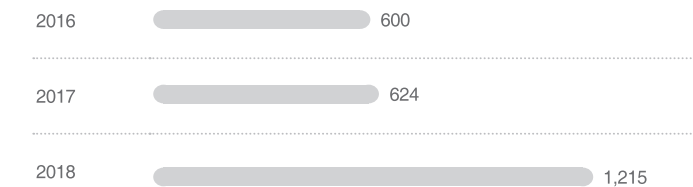


## Approach of KOLON Industries

KOLON Industries makes multilateral efforts to prevent various risks that can occur in the supply chain. Starting in 2018, the company has been managing sustainable management risks such as the environment, human rights, and safety by conducting periodic CSR assessment on major suppliers. The Code of Conduct for Suppliers was enacted in 2019, and KOLON Industries will collect the Code of Conduct Pledge from new suppliers to increase the level of social responsibility. On the one hand, it is important for KOLON Industries to build trust and win-win relationship with local communities because it has many local business sites. Each business site is actively promoting environmental protection and social contribution activities for local communities.

## Performance Measurement

Domestic social contribution expense (Unit: KRW million)





# Sustainable Supply Chain Management

## Strengthening Sustainable Management of Suppliers

**Management of Supply Chain Sustainability** KOLON Industries enacted the Code of Conduct for Suppliers in 2019 in response to risks in the supply chain. The company is establishing a process to collect the Code of Conduct Pledge from new suppliers. The Code of Conduct for Suppliers comprises 5 categories including labor and human rights, safety and health, environmental protection, and ethics management and 33 items such as the prohibition of forced labor, prohibition of child labor, prohibition of discrimination, compliance with environmental laws, and integrity and prohibition of illicit gains. The Code of Conduct Pledge will be implemented first on new suppliers, and the Pledge of existing suppliers will be collected during CSR assessment. By establishing the Code of Conduct Pledge in 2019, KOLON Industries plans to receive the Pledge from new suppliers to prohibit collusion, prohibit provision of illicit gains, and manage human rights risks starting in 2020. The Pledge stipulates that any violations are subject to disadvantages such as the restriction of participation in bidding and cancellation of contract.

**CSR Assessment Suppliers** KOLON Industries conducts CSR assessment with expanded CSR domains when carrying out supplier audits. The four major CSR domains are evaluated on major suppliers in Korea and reflected on contracting and bidding. The four major domains include human rights and labor, safety, health and environment, fair operation, product liability, and customer. They comprise 22 indicators. The evaluation results are divided into Grades A~E. Suppliers of Grade E are suspended or postponed. However, some suppliers with Grade E may continue transactions if necessary because of exclusive supply and patented technology. In 2018, CSR assessment was performed on 30% or 17 out of 57 target suppliers.

## Responsible Procurement

**Responsible Mineral Procurement** Responsible minerals refer to minerals that are mined while fulfilling the social responsibility and respecting human rights and the environment instead of financing troubled regions. This is a developed concept than conflict minerals. To cope with such needs of the international society, KOLON Industries does not purchase minerals mined in a production site that has any conflict mineral issues such as cobalt, tin, and copper. This is specified in the Code of Conduct for Suppliers to practice responsible mineral procurement.



# Shared Growth with Suppliers

## Support of Technical Knowhow

KOLON Industries has been transferring its products, technologies and business knowhow to suppliers since 2010, and also conducts joint research to promote shared growth with suppliers.

## Support of Educational Infrastructure

KOLON Industries created a win-win human resource ecosystem to share technologies and knowhow with small and medium enterprises by obtaining business approval for Consortium for HRD Ability Magnified Program in May 2018. By participating in Consortium for HRD Ability Magnified Program WiCanDoCenter has created educational infrastructures through government financing on systematic human resource management system, training facilities, equipment, and operating expenses. Various education programs are provided in the fields of technology, production, quality, safety, and business innovation to strengthen the competitiveness of small and medium enterprises and improve the capability of workers. The consortium training course was completed by 490 employees of 113 companies in 2018 and 437 workers of 139 companies in October 2019.

| Education status of WiCanDoCenter | Contents of Education  | Participants |
|-----------------------------------|--|--------------|
| August ~ December 2018            | Technology, quality, safety innovation, and common duties (31 sessions, 18 courses)        | 490persons   |
| February ~ October 2019           | Technology, production, quality, safety, and business innovation (37 sessions, 16 courses) | 437persons   |

## Financial Support

KOLON Industries creates and finances win-win fixed deposit to lessen the burden of suppliers for financing. The financial support fund was formed by depositing KRW 5.0 billion in Woori Bank, which added additional KRW 5.0 billion for a total of KRW 10.0 billion. Suppliers experiencing temporary financial difficulties are provided with loans. In 2018, 14 companies benefited from the loan support.



Shared growth evaluation in 2018

# Social Contribution and Participation in Local Community

KRW **1,215** million  
Social contribution expense in 2018

## KOLON Social Volunteer Group

KOLON Industries has been promoting volunteer activities of employees through 'KOLON Social Volunteer Group' since 2012.

**Hello Dream** KOLON Social Volunteer Group is operating the main program of 'Hello Dream' based on the slogan of 'Dream Partners, Stepping Stone for Dream' and willingness to 'Be a companion of children making their dreams come true.' Hello Dream is an integrated program to cultivate dreams of low-income and disabled children. It comprises three themes, including 'Vision Dream' to support vocational experiences, 'Hope Dream' to support special activities and cultural experiences, and 'Health Dream' to support emotional and physical health by helping social experiences of disabled children. Over 300 employees of KOLON Industries participated in volunteer activities at Noryangjin Happy Home School, Daebang Regional Child Center, and Ramwon Happy Home School in Seoul and at Jinju Study Room in Incheon and Gwangmin Happy Home School in Ulsan since 2012.



| Activities of KOLON Social Volunteer Group in 2018* | Total Activities (No.) | Total Volunteers (Person) | Total Volunteer Outcome (HourxPerson) |
|---|------------------------|---------------------------|---------------------------------------|
| Head office   | 31                     | 362                       | 1,285                                 |
| Gumi  | 95                     | 886                       | 3,853                                 |
| Gyeongsan   | 8                      | 117                       | 487                                   |
| Gimcheon 1/2  | 59                     | 201                       | 677                                   |
| Ulsan   | 10                     | 99                        | 405                                   |
| Incheon   | 3                      | 32                        | 216                                   |
| Yeosu   | 9                      | 57                        | 108                                   |
| Daesan  | 8                      | 144                       | 245                                   |
| Incheon   | 3                      | 32                        | 216                                   |
| Central R&D center (Yongin)                         | 6                      | 59                        | 207                                   |
| Central R&D center (Gumi)                           | 12                     | 178                       | 663                                   |
| <b>Total</b>  | <b>244</b>             | <b>2,167</b>              | <b>8,362</b>                          |

\*The FnC Organization of KOLON Industries is excluded.

## Major Social Contribution Activities

Every May, 'Dream Partners Week' is defined as the volunteer week for people of KOLON. All business sites, including Magok One & Only Tower, Gumi, Gimcheon, Daesan, and Gyeongsan promote new themed activities and volunteer activities each year including Shalom's House, One-Company Two-Village Relationship, and environment purification activity.

'Samnam-gil Trekking' that has been in place since 2012 is a program that donates 'make a wish' fund of KRW 1,000 whenever employees of KOLON, families, and citizens walk 1km in cooperation with people with disabilities. About 30 employees of KOLON Industries participated in 'Samnam-gil Trekking' in 2018, donating KRW 5 million to five institutions, including House of Love and Somang Rehabilitation Center.

The company also leads the efforts to solve social problems by taking part in blood donation campaigns such as 'Donate Blood for Vacation' and 'Donate Blood for Year-End Party.'

Every employee of KOLON Social Volunteer Group will strive to play the role of a responsible corporate citizen to help our neighbors and children grow with dream and hope.

|  | Unit          | 2016  | 2017  | 2018  |
|--|---------------|-------|-------|-------|
| Total Social contribution expense                        | KRW 1 million | 600   | 624   | 1,215 |
| Ratio of social contribution expense to operating profit | %             | 0.41  | 0.31  | 0.43  |
| Average volunteer hours per employee                     | Hours         | 4.30  | 4.18  | 3.82  |
| Total volunteer hours per employee                       | hours         | 6,758 | 5,393 | 8,362 |



### Clean Water and Sanitation

Combination of efforts and businesses to maintain sustainable water management and biodiversity

#### Businesses and activities

Cleanfil-S, a contaminated water treatment filter  
'Noah Project' to protect endangered animals and plants



### Industry, Innovation and Infrastructure

Innovation to build the infrastructure for the diffusion of eco-friendly technologies

#### Businesses and activities

Expansion of the hydrogen vehicle infrastructure through construction of hydrogen charging stations  
Ecomate-H, a membrane humidifier for hydrogen fuel cells



### Sustainable Cities and Communities

Safe management of chemical substances and promotion of embracing growth of the local community with a sense of responsibility about the production process and outcome

#### Businesses and activities

Quality management system  
REACH certification  
PSM  
Partner education infrastructure, financial support, etc.  
Region-based social volunteering activities  
Operation of Common Ground



### Climate Action

Preparing for intensifying climate crisis through the creation of an environmental management system and eco-friendly business innovation

#### Businesses and activities

Operation of the greenhouse gas and energy management system (GEMS)  
Response to climate change(carbon neutral program, etc.)  
Eco-friendly businesses(upcycle fashion brand, etc.)



# Financial Performance

| Item  | Unit                        | 2016             | 2017             | 2018             |
|---|-----------------------------|------------------|------------------|------------------|
| <b>Consolidated Statement of Financial Position</b>   |                             |                  |                  |                  |
| Current assets  |                             | 2,067,576        | 2,094,598        | 1,955,216        |
| Non-current assets                                    |                             | 3,181,569        | 3,567,349        | 3,617,643        |
| <b>Total assets</b>                                   |                             | <b>5,249,146</b> | <b>5,661,948</b> | <b>5,572,860</b> |
| Current liabilities                                   |                             | 1,964,924        | 2,126,148        | 2,324,354        |
| Non-current liabilities                               | KRW million                 | 1,158,945        | 1,213,352        | 1,039,971        |
| <b>Total liabilities</b>                              |                             | <b>3,123,870</b> | <b>3,339,501</b> | <b>3,364,325</b> |
| Owners of the parent                                  |                             | 1,980,981        | 2,183,300        | 2,096,547        |
| Non-controlling interest                              |                             | 144,294          | 139,146          | 111,987          |
| <b>Total equity</b>                                   |                             | <b>2,125,275</b> | <b>2,322,447</b> | <b>2,208,534</b> |
| <b>Consolidated Statement of Comprehensive Income</b> |                             |                  |                  |                  |
| Sales   |                             | 4,562,228        | 4,607,039        | 4,752,579        |
| Operating income                                      | KRW million                 | 276,731          | 197,977          | 144,916          |
| Net income  |                             | 175,966          | 122,735          | 42,925           |
| Owners of the parent                                  |                             | 170,228          | 135,069          | 65,029           |
| <b>Management performance of each business sector</b> |                             |                  |                  |                  |
| Industrial materials                                  | Net sales                   | 1,740,115        | 1,719,013        | 1,786,173        |
|   | Operating profit            | 144,511          | 118,133          | 91,164           |
| Chemicals   | Net sales                   | 816,489          | 874,320          | 900,294          |
|   | Operating profit            | 83,912           | 95,053           | 103,629          |
| Film/electronic materials                             | Net sales                   | 473,583          | 499,502          | 558,012          |
|   | Operating profit            | 52               | -21,029          | -14,351          |
| Fashion   | Net sales                   | 1,137,242        | 1,096,730        | 1,045,633        |
|   | Operating profit            | 55,061           | 48,113           | 39,946           |
| Others and clothing materials                         | Net sales                   | 394,797          | 417,473          | 462,465          |
|   | Operating profit            | -26,523          | -42,293          | -55,756          |
| <b>Total</b>  | <b>Net sales</b>            | <b>4,562,228</b> | <b>4,607,039</b> | <b>4,752,579</b> |
|   | <b>Operating profit</b>     | <b>276,731</b>   | <b>197,977</b>   | <b>144,916</b>   |
| <b>Distribution of economic outcome</b>               |                             |                  |                  |                  |
| Government  | Income tax expense          | 62,909           | 56,516           | 47,337           |
| Shareholders and investors                            | Total dividends             | 14,851           | 32,437           | 33,007           |
| Local communities                                     | Social contribution expense | 600              | 624              | 1,215            |

\* Values below 100,000 were rounded down.

# Performance

# Non-Financial Performance

## Environment\*

| Classification                                    | Unit             | 2016      | 2017      | 2018      |
|---|------------------|-----------|-----------|-----------|
| <b>Amount of raw materials used</b>               |                  |           |           |           |
| Quantity of products produced                     | Ton              | 681,511   | 725,166   | 748,249   |
| Amount of raw materials used                      | Ton /product ton | 876,662   | 930,370   | 927,009   |
| Amount of recycled raw materials used             | Ton              | 44,716    | 57,176    | 58,376    |
| <b>Amount of water used for each water source</b> |                  |           |           |           |
| Ground water                                      |                  | 345,409   | 412,947   | 294,784   |
| Industrial water                                  |                  | 3,373,230 | 3,321,602 | 3,280,179 |
| Municipal water                                   | Ton              | 317,113   | 316,736   | 320,544   |
| Surface water                                     |                  | 472,329   | 469,492   | 585,170   |
| Reclaimed wastewater                              |                  | 1,850,061 | 2,323,483 | 2,060,594 |
| <b>Water pollutants</b>                           |                  |           |           |           |
| Chemical Oxygen Demand (COD)                      |                  | 118       | 120       | 141       |
| Biological Oxygen Demand (BOD)                    |                  | 34.560    | 51.806    | 47.257    |
| Suspended Solid (SS)                              | Ton              | 61.867    | 57.399    | 57.853    |
| Total Phosphorous (T-P)                           |                  | 2.305     | 2.385     | 1.948     |
| Total Nitrogen (T-N)                              |                  | 40.696    | 35.780    | 36.572    |
| <b>Wastewater management</b>                      |                  |           |           |           |
| Emissions   | Ton              | 3,564,615 | 3,515,876 | 3,704,560 |
| Recycled volume                                   | Ton /product ton | 2.714     | 3.151     | 2.620     |
| <b>Waste management</b>                           |                  |           |           |           |
| General wastes                                    |                  | 24,793    | 27,089    | 26,590    |
| Construction wastes                               |                  | 642       | 1,904     | 1,282     |
| Specified wastes                                  | Ton              | 15,102    | 22,444    | 25,692    |
| Recycled  |                  | 28,662    | 39,074    | 41,027    |
| <b>Pollutants</b>                                 |                  |           |           |           |
| NOx   |                  | 148       | 111       | 132       |
| SOx   | Ton              | 45.100    | 31.485    | 27.230    |
| PM  |                  | 18.134    | 17.431    | 21.232    |
| <b>Environmental investment**</b>                 | KRW million      | 2,237     | 3,707     | 3,000     |

\* Data for the head office and central technology center (Yongin) only contain data collected after relocation to Magok One & Only Tower (April 2018).

Values were rounded down to the nearest whole number (rounded down from the fourth decimal place for values smaller than 10).

\*\* Environmental investment was rounded down to the nearest 100,000.

## Labor and Human Rights

| Item  | Unit                    | 2016         | 2017         | 2018         |        |
|---|-------------------------|--------------|--------------|--------------|--------|
| <b>Employee status*</b>   |                         |              |              |              |        |
| Domestic (regular employee)                                     | Male                    | 2,296        | 2,326        | 2,411        |        |
|   | Female                  | 246          | 269          | 271          |        |
|   | <b>Total</b>            | <b>2,542</b> | <b>2,595</b> | <b>2,682</b> |        |
| Domestic (contract employee)                                    | Male                    | 20           | 10           | 9            |        |
|   | Female                  | 13           | 14           | 17           |        |
|   | <b>Total</b>            | <b>33</b>    | <b>24</b>    | <b>26</b>    |        |
| Domestic (manager)**  | Male                    | 592          | 592          | 621          |        |
|   | Female                  | 53           | 64           | 83           |        |
|   | <b>Total</b>            | <b>645</b>   | <b>656</b>   | <b>704</b>   |        |
|   | Ratio of female manager | %            | 8.22         | 9.76         | 11.79  |
| Overseas  | Male                    | 1,563        | 1,668        | 2,100        |        |
|   | Female                  | 1,847        | 1,942        | 1,923        |        |
|   | <b>Total</b>            | <b>3,410</b> | <b>3,610</b> | <b>4,023</b> |        |
| Disabled (Domestic)   | Person                  | 39           | 36           | 38           |        |
| Veteran (Domestic)  | Person                  | 65           | 61           | 61           |        |
| <b>New recruitment status*</b>                                  |                         |              |              |              |        |
| Domestic  | Male                    | 163          | 163          | 168          |        |
|   | Female                  | 10           | 41           | 18           |        |
|   | <b>Total</b>            | <b>173</b>   | <b>204</b>   | <b>186</b>   |        |
|   | Ratio of female talent  | %            | 6            | 20           | 10     |
| Ratio of local talent   | %                       | 50           | 35           | 49           |        |
| Overseas  | Male                    | 979          | 1,023        | 1,617        |        |
|   | Female                  | 1,147        | 947          | 1,149        |        |
|   | <b>Total</b>            | <b>2,126</b> | <b>1,970</b> | <b>2,766</b> |        |
| <b>Remuneration for employee</b>                                |                         |              |              |              |        |
| Average wage per person   | Male                    | KRW 1,000    | 70,958       | 69,285       | 71,992 |
|   | Female                  |              | 48,827       | 47,763       | 53,403 |
| Remuneration for new employee compared to legal minimum wage*** | %                       | 241.9        | 229.4        | 203.2        |        |

\* Status of employees by region includes contract employees for domestic business sites and only includes regular employees for overseas business sites.

Values for each region include all employees and residing employees of local corporations.

\*\* Manager includes emergency plan managers, affiliated chairmen and managers or higher positions.

\*\*\* The wages of new employees are set based on an average of the total new workers' wages.



| Item  | Unit   | 2016  | 2017  | 2018   |
|---|--------|-------|-------|--------|
| <b>Status of maternity leave and parental leave (domestic)</b>      |        |       |       |        |
| Number of maternity leaves  | Male   | 122   | 74    | 96     |
|   | Female | 28    | 22    | 20     |
| Number of parental leaves   | Male   | 1     | 5     | 2      |
|   | Female | 18    | 22    | 22     |
| Rate of return after parental leave                                 | Male   | 100   | 100   | 100    |
|   | Female | 94.4  | 77.2  | 100    |
| Ratio of workers working 12 months or longer after return           | Male   | 100.0 | 80.0  | 100.0  |
|   | Female | 94.1  | 94.1  | 90.9   |
| <b>Status of flexible work system</b>                               |        |       |       |        |
| Flexible working hour system  | Male   | -     | -     | 207.00 |
|   | Female | -     | -     | 9.00   |
| Selective working hour system                                       | Male   | -     | -     | 18.00  |
|   | Female | -     | -     | 1.00   |
| <b>Status of collective negotiation</b>                             |        |       |       |        |
| Number of labor union members                                       | Person | 670   | 677   | 706    |
| Ratio of labor union members*                                       | %      | 54.5  | 54.1  | 53.5   |
| Ratio of workers applied with collective negotiation                | %      | 57.1  | 56.8  | 55.0   |
| <b>Equivalent wagefor men and women</b>                             |        |       |       |        |
| Managerial  | %      | 74.8  | 81.0  | 83.8   |
| Non-managerial  | %      | 89.0  | 89.5  | 97.6   |
| <b>Ratio of employees who received periodic personnel appraisal</b> |        |       |       |        |
| Domestic  | %      | 86.70 | 86.81 | 88.30  |
| Overseas  | %      | 99    | 98.8  | 99.2   |
| <b>Employee health and safety</b>                                   |        |       |       |        |
| Lost Time Injury Rate (LTIR)  |        | 2.58  | 1.03  | 1.90   |
| Ratio of employees who received a health checkup                    | %      | 99    | 98    | 98     |

\*Ratio of labor union member=No. of members/No. of subjects of the labor union

## Ethics

| Item   | Unit | 2016     | 2017     | 2018     |
|--|------|----------|----------|----------|
| <b>Status of disciplinary actions against ethics management violations</b>                         |      |          |          |          |
| Receiving money and valuables, embezzlement, malpractice   |      | 1        | 0        | 1        |
| Violation of regulations   |      | 1        | 2        | 2        |
| Environmental and safety accidents   | Case | 3        | 4        | 1        |
| Sexual harassment and harassment at work   |      | 3        | 1        | 4        |
| <b>Total</b>   |      | <b>8</b> | <b>7</b> | <b>8</b> |
| <b>Ratio of the Code of Ethics Pledge of employees (Domestic)</b>                                  | %    | 100      | 100      | 100      |
| <b>Ratio of domestic business sites that received internal audit (related to corporate ethics)</b> | %    | 100      | 100      | 100      |

## Supply Chain

| Item  | Unit  | 2016         | 2017         | 2018         |
|---|-------|--------------|--------------|--------------|
| <b>Partner CSR assessment</b>                                   |       |              |              |              |
| Number of new partners registered among primary suppliers       | Case  | 53           | 47           | 57           |
| Ratio of major partners that received CSR assessment            | %     | -            | -            | 6            |
| Ratio of major partners that received CSR due diligence         | %     | -            | -            | 6            |
| Number of partners advised through CSR audit                    | Case  | -            | -            | 7            |
| Number of partners suspended through CSR audit                  | Case  | -            | -            | 0            |
| Number of partners suspended temporarily or permanently         | Case  | 37           | 38           | 36           |
| <b>Win-winmanagement</b>  |       |              |              |              |
| Shared growthevaluation   | Grade | Satisfactory | Satisfactory | Satisfactory |
| Ratio of green product purchased                                | %     | 23.2         | 25.1         | 26.7         |
| Ratio of partner employees who received safety/health education | %     | 100          | 100          | 100          |

# Sustainable Management KPI

## Environment

| Item  | Unit                | 2018          |
|---|---------------------|---------------|
| <b>Energy consumption and greenhouse gas</b>            |                     |               |
| Overall energy consumption                              | TJ                  | 12,681        |
| Greenhouse gas emissions* (scope 1, scope 2)            | tCO <sub>2</sub> eq | 680,283       |
| <b>Water resource</b>                                   |                     |               |
| Amount of underground water used                        | Ton                 | 294,784       |
| Amount of industrial water used                         | Ton                 | 3,280,179     |
| Amount of waterworks used                               | Ton                 | 320,544       |
| Total amount of water used                              | Liter               | 4,481,357,000 |
| Wastewater emissions                                    | Ton                 | 3,704,560     |
| Recycled wastewater                                     | Ton                 | 1,960,800     |
| <b>Pollution preparedness in local community</b>        |                     |               |
| Number of emergency response drills                     | No.                 | 92            |
| Number of chemical leakage accidents                    | Case                | 0             |
| <b>Raw materials, chemicals, and wastes</b>             |                     |               |
| NOx   |                     | 132           |
| SOx   |                     | 27            |
| PM  |                     | 21            |
| Amount of recycled raw materials used                   | Ton                 | 58,376        |
| Total specific wastes                                   |                     | 25,692        |
| Total general wastes                                    |                     | 26,590        |
| <b>Environmental service and support</b>                |                     |               |
| RCcertification rate (domestic manufacturing sites)     | %                   | 62.5          |
| Amount of environmental investment                      | KRW 1,000           | 3,000,253     |
| Ratio of employees who received environmental education | %                   | 100           |

\* Based on certified emissions

## Labor and Human Rights

| Item  | Unit      | 2018       |
|---|-----------|------------|
| <b>Health and safety of employees</b>   |           |            |
| Ratio of employees who received health/safety education   | %         | 100        |
| Ratio of employees who received health checkup  | %         | 98         |
| Lost Time Injury Rate (direct employment)   |           | 1.90       |
| Severity rate (direct employment)   | Day       | 0.29       |
| <b>Working conditions</b>   |           |            |
| Average wage per person (male)  | KRW 1,000 | 71,992     |
| Average wage per person (female)  | KRW 1,000 | 53,403     |
| Welfare benefit expense (male)  | KRW 1,000 | 18,665,268 |
| Welfare benefit expense (female)  | KRW 1,000 | 1,575,670  |
| Number of maternity leaves (male)   | Person    | 96         |
| Number of maternity leaves (female)   | Person    | 20         |
| Number of parental leaves (male)  | Person    | 2          |
| Number of parental leaves (female)  | Person    | 22         |
| Ratio of workers working 12 months or longer after return (male)  | %         | 100        |
| Ratio of workers working 12 months or longer after return (female)                                      | %         | 90.9       |
| Flexible working hour system (male)   | Person    | 207.00     |
| Flexible working hour system (female)   | Person    | 9.00       |
| Selective working hour system (male)  | Person    | 18.00      |
| Selective working hour system (female)  | Person    | 1.00       |
| <b>Career management and education</b>  |           |            |
| Ratio of employees who received job training (domestic)   | %         | 41.1       |
| Education hours per employee  | Hour      | 51.0       |
| <b>Social conversation (opinions of stakeholders)</b>   |           |            |
| Ratio of labor union members (domestic)   | %         | 53.48      |
| Ratio of collective negotiation   | %         | 55         |
| <b>Diversity, discrimination, and harassment</b>  |           |            |
| Ratio of employees who received human rights education  | %         | 100        |
| Ratio of minorities (disabled, multicultural, veteran)  | %         | 3.656      |
| Ratio of minorities (disabled, multicultural, veteran) in management (excluding the Board of Directors) | %         | 0          |
| Ratio of female employees (domestic)  | %         | 10.64      |
| Ratio of female managers (excluding the Board of Directors)   | %         | 5.1        |



| Item   | Unit  | 2018 |
|--|-------|------|
| <b>Child labor, forced labor, and human trafficking</b>  |       |      |
| Ratio of domestic business sites that applied human rights impact assessment (prohibition of child/forced labor) | %     | 100  |
| Employee satisfaction survey (5-point scale)   | Point | 3.53 |

### Ethics

| Item   | Unit | 2018                     |
|--|------|--------------------------|
| Ratio of employees educated on corporate ethics (domestic)                               | %    | 49.2                     |
| Number of reports in anti-corruption report channels                                     | Case | 3                        |
| Number of cases found and reported legal measures  | Case | 2 (criminal prosecution) |
| Ratio of business sites that conducted internal audit/risk assessment on business ethics | %    | 100                      |
| Ratio of the Code of Ethics of employees (domestic)                                      | %    | 100                      |

### Supply Chain

| Item  | Unit | 2018 |
|---|------|------|
| Ratio of total partners that received CSR assessment                          |      | 30   |
| Ratio of persons in charge of procurement educated on sustainable procurement | %    | 0    |
| Ratio of employees of partners who received safety education                  |      | 100  |

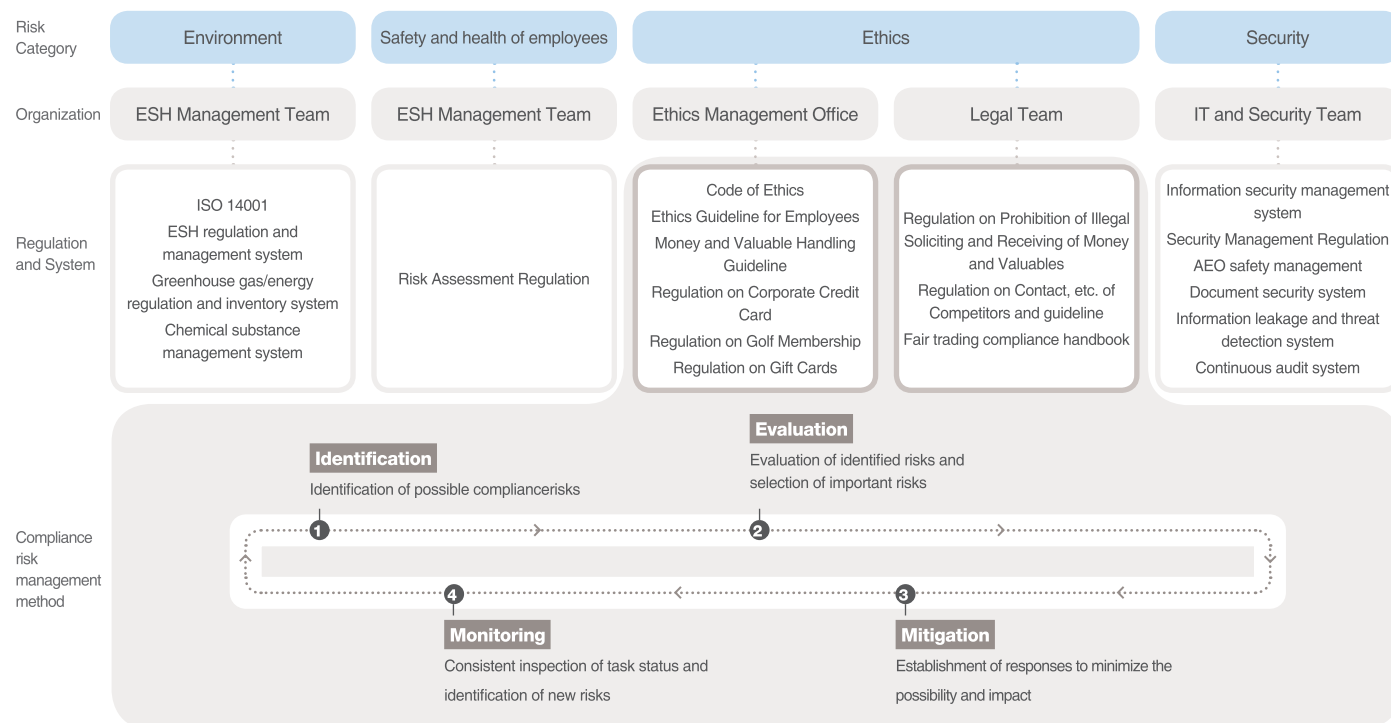
# APPENDIX

# Risk Management

## Risk Management Process

KOLON Industries prevents and effectively controls environmental factors threatening sustainable management by expanding the scope of risks to non-financial areas. The risk management process can be largely divided into the environment, safety and health of employees, ethics, and security. First off, environmental risk management involves the establishment of detailed regulations based on ISO 14001. Safety and health risks of employees are identified by evaluating safety of facilities through the Risk Assessment Team in accordance with the 'Risk Assessment Regulation.' They are managed by taking follow-up measures for each risk and hazard grade. In addition, the 'Regulation on Contact, etc. of Competitors' and guideline were enacted to prevent anti-competitive acts. The information security management system protects customer information, personal information, and business secrets.

### Risk management organization



## Risk Monitoring

KOLON Industries responds quickly to risks by monitoring them. There is a 24-hour online report channel for information infringement and ethics violations. When a violation report is received, relevant departments handle the report promptly. Moreover, changes in relevant laws and policies are monitored at all times and shared with all employees via newsletters and intranet, allowing each member to prevent risks voluntarily.

### Risk assessment coverage

| Item  | Unit | 2016 | 2017 | 2018 |
|---|------|------|------|------|
| Ratio of environmental risk assessment(domestic manufacturing sites)                                |      | 100  | 100  | 100  |
| Ratio of business sites that received internal audits on corporate ethics                           | %    | 100  | 100  | 100  |
| Ratio of business sites that conducted human rights impact assessment(including child/forced labor) |      | 100  | 100  | 100  |

# Sustainable Management Index

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|   | 405-2        | Ratio of basic salary and remuneration of women to men   | 54         |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 28         |
|   | 103-2        | The management approach and its components   | 29         |
|   | 103-3        | Evaluation of the management approach  | 29         |
| GRI 406: Non-discrimination                               | 406-1        | Incidents of discrimination and corrective actions taken   | 40, 55     |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 28         |
|   | 103-2        | The management approach and its components   | 29         |
|   | 103-3        | Evaluation of the management approach  | 29         |
| GRI 407: Freedom of Association and Collective Bargaining | 407-1        | Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk             | 31, 33     |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 28         |
|   | 103-2        | The management approach and its components   | 29         |
|   | 103-3        | Evaluation of the management approach  | 29         |
| GRI 408: Child Labor                                      | 408-1        | Operations and suppliers at significant risk for incidents of child labor  | 31, 33     |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 28         |
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| GRI 409: Forced or Compulsory Labor                       | 409-1        | Operations and suppliers at significant risk for incidents of forced or compulsory labor                                   | 31, 33     |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 28         |
|   | 103-2        | The management approach and its components   | 29         |
|   | 103-3        | Evaluation of the management approach  | 29         |
| GRI 412: Human Rights Assessment                          | 412-1        | Operations that have been subject to human rights reviews or impact assessments  | 29, 32, 58 |
|   | 412-2        | Employee training on human rights policies or procedures   | 29, 32, 57 |
|   | 412-3        | Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening | 46         |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 28         |
|   | 103-2        | The management approach and its components   | 29         |
|   | 103-3        | Evaluation of the management approach  | 29         |
| GRI 413: Local Communities                                | 413-1        | Operations with local community engagement, impact assessments, and development programs                                   | 29, 32, 58 |
|   | 413-2        | Operations with significant actual and potential negative impacts on local communities                                     | 29, 32, 57 |
| GRI 103: Management Approach                              | 103-1        | Explanation of the material topic and its Boundary   | 44         |
|   | 103-2        | The management approach and its components   | 45         |
|   | 103-3        | Evaluation of the management approach  | 45         |

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| GRI 414: Supplier Social Assessment | 414-1        | New suppliers that were screened using social criteria                                       | 55     |
|                                     | 414-2        | Negative social impacts in the supply chain and actions taken                                | 46, 55 |
| GRI 103: Management Approach        | 103-1        | Explanation of the material topic and its Boundary   | 22     |
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| GRI 416: Customer Health and Safety | 416-1        | Assessment of the health and safety impacts of product and service categories                | 27     |
| GRI 103: Management Approach        | 103-1        | Explanation of the material topic and its Boundary   | 36     |
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| GRI 418: Customer Privacy           | 418-1        | Substantiated complaints concerning breaches of customer privacy and losses of customer data | 42     |
| GRI 103: Management Approach        | 103-1        | Explanation of the material topic and its Boundary   | 36     |
|                                     | 103-2        | The management approach and its components   | 37     |
|                                     | 103-3        | Evaluation of the management approach  | 37     |
| GRI 419: Socioeconomic Compliance   | 419-1        | Non-compliance with laws and regulations in the social and economic area                     | 40, 55 |

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### Guiding Principle for Responsible Care

Responsible Care is a comprehensive international initiative that pursues environmental, safety, and health improvement throughout the life cycle of products including development, manufacture, selling, distribution, use, and disposal of chemical products in the global chemical industry. As a member of Responsible Care, KOLON Industries will strive to practice sustainable management and create social values according to the basic policy below.

1. To make Responsible Care part of management policies and have all company members participate in the implementation of the program.
2. To make matters relating to the Environment, Safety and Health one of priorities, in order to minimize potential risks during the production process, transportation, use and disposal of our products.
3. To communicate and respond actively to the concerns related to the Environment, Safety and Health of members, customers and other stockholders.
4. To provide customers with adequate counsel and information on the potential risks associated with our products, in order to ensure their safe use, transportation and disposal.
5. To co-operate with government agencies and/or experts with a view of solving problem as well as being involved in technical development in matters related to the Environment, Health and Safety.
6. To encourage exchange with the international chemical industry, of information related to the Environment, Health and Safety, and to participate in appropriate international activities.
7. To establish a co-operation and networking system between member companies, to share the knowledge and experience pertaining to Environment, Safety and Health matters, with a view of building a successful industry, which embraces and promotes the principles of the Responsible Care program in Korea.

### UN Global Compact 10 Principles

Since joined the UN Global Compact in 2008, KOLON Industries has reflected the ten principles in four major sectors, including human rights, labor, environment, and anti-corruption through overall management. KOLON Industries will strengthen CSR competitiveness as global standard with faithful implementation of the ten principles.

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

# Third-Party's Assurance Statement

To the stakeholders of KOLON INDUSTRIES, INC.

Marcspoon (hereinafter "the assurance company") has been requested by KOLON INDUSTRIES, INC. to verify the contents of its 2019 Sustainability Report (hereinafter "the Report") and hereby submits this assurance statement on the organizational and business activities as below. The management of KOLON Industries is responsible for the collection and presentation of information included in the Report, and the assurance company's responsibility is limited to providing assurance opinions on sustainable management data in the assurance scope stipulated below.

**Standard and Approach**  
The assurance company performed a type 1, moderate level of assurance using AA1000AS (2008) as assurance standards, evaluated the conformity to the Principles of Inclusivity, Materiality, and Responsiveness, and verified the compliance with the GRI Standards guidelines and ISO 26000. The assurance period was defined to be the same as the reporting period of the Report, from January 1, 2018 to December 31, 2018. The assurance company verified environmental efforts, including social responsibility and economic responsibility.

**Our Approach**  
The assurance company verified the facts of the Report, data reported, and internal processes to write the Report as below.

- Reviewed the methodology and process of computing data
- Reviewed reference documents and data supporting the core arguments of the Report
- Interviewed the stakeholders related to activities and performances in the reporting period
- Reviewed the process for selecting important issues of the stakeholders that can affect overall business operation of KOLON Industries
- Checked the contents and quality compliance according to GRI Standards guidelines

**Our Conclusion**  
The assurance company reviewed the contents included in the draft of the Report and presented its opinions, and the Report was revised as necessary. The assurance company confirms that the Report reflects social responsibility activities and performances of KOLON Industries in a faithful and fair way without serious errors or prejudices. The Report has been prepared in accordance with the 'Core Option' of GRI Standards guidelines.

The Report reflects the Principles of Inclusivity, Materiality and Responsiveness under AA1000AS (2008) adequately, and details are as follows.

- **Inclusivity:** KOLON Industries has a process to ensure the participation of the stakeholders, shares information with its stakeholders using various communication channels, and collects and reflects opinions of the stakeholders.
- **Materiality:** The Report covers critical issues of KOLON Industries by assessing the materiality of economic, environmental, and social issues. The assurance company could not find any critical issues left out.
- **Responsiveness:** The assurance company confirmed that the Report responds to the critical issues found and opinions of the stakeholders based on a response process.

**Recommendation for Improvement of Sustainable Management**  
The assurance company recognizes consistent efforts and outcomes of KOLON Industries to enhance its sustainable management and recommends engaging in active goal-oriented management for continuous improvement. KOLON Industries is advised to establish long-term goals in each domain of sustainable management, manage annual progress, and offer incentives to motivate employees. As KOLON Industries has been concentrating on building the system for sustainable management, efforts are needed to share the achievements so far with the external stakeholders.



한정원

2019. 9. 10

Representative Consultant Jeongwon Han

# Affiliated Organizations and Principles

| Name of Association   | Communication Channel         | Join Year |
|---|-------------------------------|-----------|
| Korea Employers' Federation                                   | Management and Planning Team  | 1990.01   |
| Association of Economic Organizations                         | Management and Planning Team  | 1990.01   |
| Anyang Chamber of Commerce                                    | Personnel Team                | 1997.07   |
| IMI International Management Institute                        | Personnel Team                | 1990.01   |
| ASIA BUSINESS COUNCIL   | Personnel Team                | 1990.01   |
| Federation of Korean Industries                               | Management and Planning Team  | 1990.01   |
| Korea Economic Research Institute                             | Management and Planning Team  | 1990.01   |
| Korean Trade Association                                      | Personnel Team                | 1990.01   |
| Korea Packing Association                                     | Business and Planning III     | 1993.01   |
| Korea Industrial Technology Association                       | Technology Division           | 1993.01   |
| Korea AEO Association   | Management and Planning Team  | 2011.05   |
| Emergency Planning Division                                   | Emergency Planning Division   | 1989.05   |
| Gwacheon Veteran's Association                                | Materiality Division          | 1997.06   |
| Polymer Society of Korea (CPI)                                | CPI                           | 2012.01   |
| Korea Chemicals Management Association                        | Technology and Planning       | 1997.03   |
| GPRA Meeting (Global Phenolic Resins Association)             | HIRENOL                       | 2007.11   |
| Korea Foundry Society   | HIRENOL                       | 2013.01   |
| Korea Petrochemical Industry Association                      | Personnel Team                | 1977.04   |
| Korea Management Association Registrations & Assessments inc. | Organization Development Team | 2007.04   |
| Korea Productivity Center                                     | Organization Development Team | 2007.04   |
| Korea Business Archery Association                            | Archery Team                  | 2012.01   |
| Korean Geosynthetics Society                                  | SPB Team                      | 2009.01   |
| Fair Competition Federation                                   | Legal Team                    | 2013.07   |
| National Museum of Korea                                      | Personnel Team                | 2016.08   |
| Korea Exchange  | Technology Division           | 2016.01   |
| Korea P.E.T. Film Industry Council                            | Business and Planning III     | 2013.01   |
| Korean society for Quality Management                         | Technology DivisionGDI        | 2017.04   |
| Korea Personal Improvement Association                        | WICAN DO                      | 2013.01   |
| Korea Printed Circuit Association (KPCA)                      |                               | 2013.01   |





To minimize environmental impact and use of natural resources, spot color and coating are avoided, and soybean oil is used for printing process.