



Kolon Industries 2021 Sustainability Report www.kolonindustries.com

This report is the ninth Sustainability Report annually published by KOLON INDUSTRIES (previously titled Environmental Report until 2017). The 2021 KOLON INDUSTRIES Sustainability Report aims to introduce the company's sustainability management strategies, activities, and major accomplishments, and to communicate the company's vision for the future through sustainable management. By establishing an internal indicator definition system for non-financial performance, a part of the non-financial data disclosed through the 2020 Sustainability Report has been modified. Regarding significant changes during the reporting period, the fabric business of KOLON MATERIALS was suspended by the resolution of the Board of Directors on August 2, 2021, and such suspension was approved at an extraordinary general meeting of shareholders on September 14, 2021

#### **Reporting Boundary**

KOLON INDUSTRIES consists of a manufacturing organization that provides industrial materials, film/electronic materials, and chemical industries, and FnC organization which runs the fashion industry. This report covers the head office of the manufacturing organization and its eight domestic business sites (Gumi, Gyeongsan, Gimcheon 1, 2, Ulsan, Yeosu, Daesan, Incheon) and for some cases, data from overseas business sites of the manufacturing organization and FnC organization are included.

#### **Reporting Period**

The primary reporting period is from January 1, 2021 to December 31, 2021, and a number of qualitative performances, including those from the first half of 2022, are included. In addition, this report contains data for the previous three years — 2019, 2020, and 2021 — in order to identify the current status of increase and decrease as well as recent trends.

#### **Reporting Standards**

This report complies with the core option standards of the Global Reporting Initiative (GRI) Standards guideline, and consideration was given to the SDGs international code of conduct during the reporting process. KOLON INDUSTRIES reports its financial data based on the Korean International Financial Reporting Standards (K-IFRS).

#### Third Party Assurance

This report has been reviewed and verified by BSI, an independent third-party certification body, and the results are available in the Assurance Statement.





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#### **GLOBAL INITIATIVE REPORT**

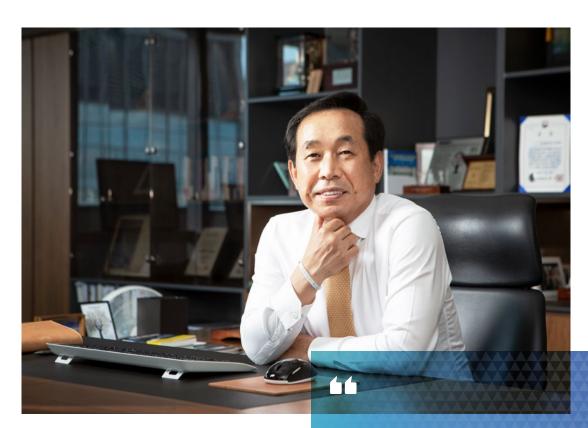
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# **CEO MESSAGE**

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We will take the initiative in leading sustainable management by positioning ourselves as a global top-tier chemical/materials company through constant innovation and active change.

#### Greetings. This is Hee-Goo Jang, CEO of KOLON INDUSTRIES.

The COVID-19 pandemic, which has swept the globe for the past three years, has drastically changed our way of life and raised numerous issues for businesses. Securing the safety and health of employees has emerged as a top priority for the company's survival. Businesses are now required to contribute more to the establishment of a social safety net within the local community. It also reminded businesses of the sense of mission to intensify our efforts to partake in the global movement toward carbon reduction and environmental protection. As one of the company's fundamental objectives is to continuously contribute to national and social development through profit generation, the necessity of enhancing our sustainability management is accelerating.

In the midst of this, the year 2022 faces an unprecedentedly complex crisis: high inflation, high interest rates, and high exchange rates as a result of the aftermath of the COVID-19 pandemic and various internal and external factors. There are obstacles in our path that are difficult to overcome through general business activities.

In light of this, KOLON INDUSTRIES intends to make 2022 the beginning of a significant transformation by identifying opportunities amidst this unprecedented crisis. By establishing the Corporate Strategy Officer (CSO) organization, we intend to exercise a different level of imagination in an earnest effort to identify more future-oriented businesses. In addition, by learning from the legacy of overcoming numerous crises in the past, KOLON INDUSTRIES intends to pursue sustainable management as follows.



As "Lifestyle Innovators," all executives and employees of KOLON INDUSTRIES will place a greater emphasis on internalizing ESG management in all business processes, with ESG factors serving as the foundation of the company's management philosophy.

#### First, we will realize the internalization of ESG through the ESG Committee.

In my role as CEO the previous year, I established the ESG Management Policy and carefully reviewed and deduced the key tasks based on the five core strategies encompassing the environment, society, and governance. The internal ESG Committee was established in January 2022, thereby accelerating the promotion of ESG management. The ESG Committee will fulfill its responsibility by proposing new changes and innovative projects and discussing in a company-wide manner so that E (environment), S (society), and G (global) capabilities can be maximized, and make every effort to internalize ESG among executives and employees.

#### Second, we will actively promote management of decarbonization.

To achieve the "Net Zero by 2047" goal for overseas business sites, we first established the KOLON Carbon Neutralization TF (KCN TF). In order to satisfy customers' request for carbon neutrality of products, we will first measure and calculate greenhouse gas (GHG) emissions by performing Life Cycle Assessment (LCA) for carbon footprint management that can be internationally certified for tire cords and aramid products. In addition, to reach the GHG reduction goal, we intend to develop a phased strategy that includes energy efficiency, transition to a green process, and the use of decarbonized alternative energy. In addition to coordinating the implementation plan, we will establish a carbon-neutral standard as well as relevant management/evaluation system. We further intend to strategically link with future hydrogen businesses, such as expanding renewable energy use and carbon capture, use and storage (CCUS).

#### Third, we will consider the enhancement of safety management as our primary objective.

KOLON INDUSTRIES has expanded and reorganized the safety and health center as an organization committed to advancing the safety system, established safety and health management policies, and formed three teams, including the affiliated S&H Team, Safety Diagnosis Team, and Environmental Management Team. By maximizing safety management capabilities in the field, we will become an accident-free company that does not compromise on safety.

#### Fourth, we will establish ESG-related supply chain partnerships.

We provide technical and financial assistance for the business stability of our business partners and respond to the win-win growth index evaluation. In ESG management, sustainable supply chain management and shared growth with business partners (BPs) cannot be overemphasized. We will evaluate strategically significant supply chain priorities and develop implementable support plans, such as enhancing environmental management capabilities and fulfilling social responsibilities.

#### Fifth, we will establish sustainable governance.

At the general shareholders' meeting in March 2022, a female outside director was appointed, and the status of voting rights exercised by the Board of Directors, the rules of the Board of Directors and related subcommittees, etc. were posted on the company website. In addition, we established and disclosed a dividend policy for the medium to long term in order to protect the rights and interests of shareholders. Various efforts to improve the governance structure's transparency will continue in the future.

As a Lifestyle Innovator, all employees of KOLON INDUSTRIES will place greater emphasis on internalizing ESG management in all business processes, using ESG factors as the foundation of the company's management philosophy. We will make every effort to establish ourselves as an ESG leading company that meets the expectations of our society. We ask for your unwavering support and keen interest in the challenges of KOLON INDUSTRIES.

Thank you.

CEO of KOLON INDUSTRIES

HAFry

Hee-Goo Jang

# **COMPANY PROFILE**

Kolon Industries 2021 Sustainability Report

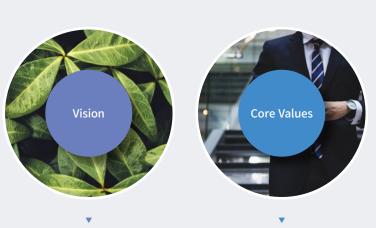
Founded in 1957 as the first nylon producer in Korea in the name of Korea Nylon, KOLON INDUSTRIES, INC. secured growth engine through business diversification and advancement. Under the management philosophy of innovation in customer lifestyles, we will continue to provide products and services that will enhance the quality of life and grow based on industry-leading R&D and advanced technology.

KOLON INDUSTRIES, INC		
110 Magokdong-ro, Gangseo-gu, Seoul, Republic of Korea		
Hee-Goo Jang, Seok-Jin Yoo		
Industrial materials, film /electronic materials, chemicals, and fashion		
April 12, 1957 (separate registration on January 5, 2010)		
3,811 (based on business report as of Dec. 2021)		
http://www.kolonindustries.com/		

<sup>\*</sup> See KOLON INDUSTRIES' 12th annual business report (p.359 Shareholder Information; p.391 Status of Consolidated Subsidiaries; p.393 Status of Affiliates)



#### Management Philosophy and Vision System





#### **Core Values**

With the objective of becoming the most loved KOLON by customers, cultivating distinctive and differentiated competencies and the highest level of competitiveness by all executives and employees.



#### Directions

First Choice of Customers Uniqueness Individual Excellence



Innovate the lifestyle of our

customers by providing products

and services that improve the

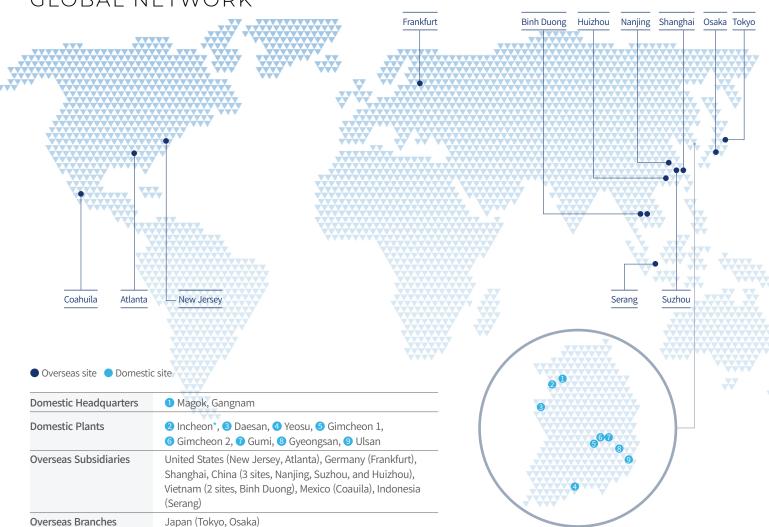
Vision

quality of life



# **MAIN BUSINESS SITES**





<sup>\*</sup> Withdrawal of Incheon Plant operations in 2022

#### Main Subsidiaries

#### **KOLON GLOTECH**

#### "We are committed to developing ecofriendly materials and parts."

KOLON GLOTECH is a diversified manufacturer that produces automotive interior materials, auto parts, living materials, antibacterial materials, and cutting-edge new materials, etc. Its primary products include car seat fabrics and covers as well as living materials such as artificial turf. The company has a systematic production process and numerous quality standard certifications. By establishing production bases in Korea and China and distribution channels in the United States, the company is able to provide high-quality products to the entire world.

**Major Business and Products** Car seats, car seat modules, carpets, artificial leather, vehicle lightweight parts, etc. / artificial turf, Q+ (antibacterial material filters, etc.)

#### **KOLON PLASTICS**

# "We'll be reborn as a 'Global Major Player' via research and development of new materials."

KOLON PLASTICS is a specialized engineering plastics (EP) company with the largest and highest-quality product portfolio in Korea, ranging from POM, PA and PBT to KompoGTe, a carbon fiber reinforced composite material. The company has complete production capabilities, from EP-based products to compound products with enhanced functions, thereby supplying EP materials to over 90 countries worldwide.

**Major Business and Products** Engineering plastics (PA, PBT, PIM), base resin and compound resin





# **Industrial Materials**

#### **Business Overview**

Kolon Industries 2021 Sustainability Report

We manufacture and sell tire cords, airbags, industrial yarn, aramids, spunbond, synthetic leather, membrane humidifier, and PEM/MEA.

**Tire Cord** It is a fiber reinforcement that forms the frame of a tire, and the majority of our clients are tire manufacturers.

**Air Bags** We produce cushions for automobile airbags and supply them to manufacturers of automobile parts modules.

**Industrial Yarn** We produce industrial materials for such items as seat belts, as well as PE materials for gloves and cold blankets.

**Aramids** These are sold as filament, pulp, staple, etc. for a variety of applications, including bulletproofing, optical cables, and hoses.

**Spunbond** Industrial non-woven fabrics are used for filters, carpets, civil engineering, etc.

**Artificial Leather** It is used for automobile interiors, furniture, and luxury goods.

Membrane Humidifier As a moisture control device for fuel cells, it has been mass-produced for vehicles, power plants, and buildings, and is also utilized in fuel cell systems.

**PEM/MEA** As a separator with selective permeability, it contributes to the production of electricity in a hydrogen fuel cell.

#### Market Outlook

Tire cords and aramids, the primary products in the industrial materials sector, served as cash cows that drove business performance. In particular, the tire cord sector is experiencing growth compared to the prior year as a result of aggressive strategies to combat the burden of rising global logistics costs. The expansion of electric vehicles is also increasing the supply of high-performance tire cords in the aramid industry, and the "full production/full sale" trend is maintained due to the robust demand for 5G optical cables. To strengthen their market dominance, these two sectors have announced and are implementing expansive expansion plans. Despite the shortage of semiconductors for vehicles, the gradual recovery of the global automobile market, including the supply of electric vehicles, increased demand for automotive engineering plastics, thereby enhancing the performance of subsidiaries such as KOLON PLASTICS. According to the consolidated financial statements of KOLON PLASTICS, the company's sales for fiscal year 2021 recorded KRW 405.3 billion, a 37.3% increase year-on-year, along with an operating profit of KRW 27.7 billion and a net income of KRW 21.8 billion, which increased by 618.0% and 632.6%, respectively. Despite an unfavorable internal and external environment. such as a drop in demand for auto parts due to a global shortage of semiconductors, shipment delays due to the spread of the COVID-19 mutation, and an increase in freight and raw material prices, we have significantly increased our sales and profits. See KOLON INDUSTRIES' 12th annual

business report (p.359 Shareholder Information; p.391 Status of Consolidated Subsidiaries; p.393 Status of Affiliates).

In addition, since last year, the company has expanded its customer base to include overseas automakers and global home appliance manufacturers to shift to a structure that can generate high profits, and has been strengthening its global market position.

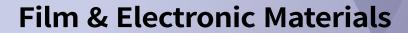
#### **Future Strategy**

KOLON INDUSTRIES has decided to invest KRW 68.4 billion in the expansion of the polyester (PET) tire cord manufacturing facilities at the tire cord factory in Binh Duong, Vietnam, with an expected completion date of September 2022. In response to the increase in demand, we will invest KRW 240 billion in the aramid sector to double up facilities, and production is expected to increase to 15,000 tons in 2024, doubling from the previous year.

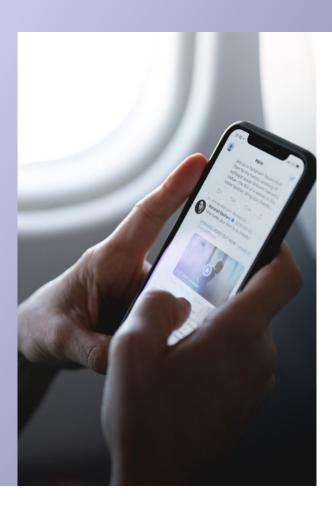
As the automobile industry continues to expand, so does the industry for automobile parts and materials. Specifically, as global safety regulations become stricter, the installation rate of safety-related products is increasing at a rate that exceeds that of automobiles. As the number of autonomous vehicles increases in the future, safety concerns will grow, and as a result, both the demand for safety-related products and the rate of installation are anticipated to increase further.



Kolon Industries 2021 Sustainability Report

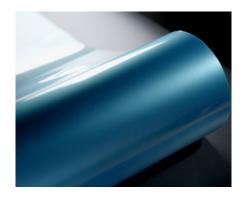






#### **Business Overview**

In addition to packaging films, the KOLON INDUSTRIES Film Division, which is part of the film/electronic materials organization, focuses on the development and sale of functional films applicable to multiple industries. Major clients are manufacturers of packaging material converters, industrial film coating makers, and photovoltaic backsheet makers. The annual sales volume of KOLON INDUSTRIES' Electronic Materials Organization, which manufactures and sells DFR products used for PCB products, QD barrier films, and overcoats, is approximately KRW 605.2 billion.



#### Market Outlook

The sales of the film/electronic materials organization increased slightly compared to the previous year due to increased sales of high valueadded films such as MLCC and polarizer films, the packaging film business in Indonesia, and expanded sales of high-value DFR products

#### **Future Strategy**

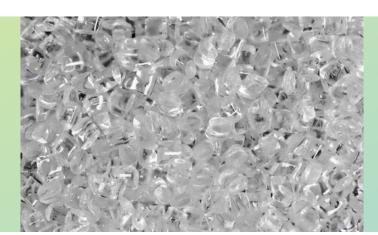
According to Wood Mackenzie Chemicals, a filmrelated market research firm, PET film is predicted to grow at a CAGR of 5.4% between 2020 and 2025, while nylon film will grow at a CAGR of 4.1%. PET and nylon films, which have excellent properties and processability, are products with steady and stable growth, They are anticipated to be used as major materials in many new industries in the future.

In the LCD material industry of the electronic materials organization, the Chinese market is absorbing products with low technological barriers, while the domestic market is contracting.

The deposition film market is also dominated by low-cost Southeast Asian products, and domestic competition is fierce. Moreover, the Japanese market, which places a premium on quality, has limited access to Southeast Asian products. In the electronic materials organization, we are expanding business with high-quality products by investing in the expansion of deposition film. In the case of PCB market, the demand for products with high added value, such as mobile/automotive products, is predicted to rise, and we are competing with global companies through advanced technology and rapid customer response.

In the case of the transparent polyimide film market, foldable smartphones have become available in 2019, and it is expected that the market will expand rapidly as it can be applied to more customers and various types of foldable display devices in the future as well.





# Chemicals

#### **Business Overview**

Kolon Industries 2021 Sustainability Report

KOLON INDUSTRIES' chemicals business, which is part of the chemical materials organization, manufactures and sells hydrocarbon resins, phenolic resins and epoxy resins. Four domestic plants (Ulsan, Yeosu, Daesan, Gimcheon, and Incheon Plants) and Suzhou plnat in china have production capacities of 320,000 tons per year, making hydrocarbon resin, phenolic resin and epoxy resin to supply to multinational customers and domestic/overseas companies that make tires, paints, tapes, adhesives for sanitary materials, electronic materials, waterproofing materials, etc. About KRW 900 billion is made in sales every year, and most of the products are HIKOTACK, SUKOREZ, HIRENOL, HIROXY, KONY URETHANE, or ELLAS.



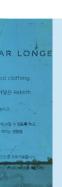
#### Market Outlook

In the chemicals business, there was a big rise in the need for special epoxy resins for electronic materials as the COVID-19 pandemic caused a lot of people to buy more electronics. Both hydrocarbon resins, which are used to make tires and are expanding its market for tire makers around the world, and hydrogenated resins, which are mostly used for daily necessities, demonstrate satisfactory performance. In the future, we plan to respond to changes in the market by making sure our prices are competitive by expanding customer network and adding high value-added product lines to diversify our portfolio.

#### **Future Strategy**

We have finished making a new hydrocarbon resin using our own technology, and in April 2021, we have completed an extension of the Yeosu Plant with production capacity of 15,000 tons per year. With this extension, we have expanded our business portfolio to now include high reactive resin (HRR), pure monomer resin (PMR), liquid hydrocarbon resin, and high-performance tire resin. Hydrocarbon resin is mostly growing in developing countries, and among them, hydrogenated hydrocarbon resin, which is mostly used to make sanitary adhesives, is growing at a faster rate. Since the plant was renovated in 2009, phenolic resin has the most up-to-date automated production facilities and is making products with more stable production and quality than other phenolic resin makers. However, growth changes based on the business trend in different industries, such as paint, tires, electronic materials, and casting. After the second extension was finished in October 2018, we now have become the global No. 1 and secured market share in special epoxy for electronic materials (CCL). Stable sales are likely to grow in the future as the demand for 5G and environmentally friendly products like halogen-free and lead-free products grows.





# **Fashion**

Kolon Industries 2021 Sustainability Report

KOLON INDUSTRIES' FnC Division, a pioneer in the development of the Korean fashion industry, maintains a balanced brand portfolio in accordance with pandemic and endemic market conditions and trends. By bolstering our online business through digital transformation, we maintain our leadership position in the domestic fashion industry.





#### **Business Overview**

The fashion industry encompasses all industries that produce fashion-related goods. It is a complex industry that reflects consumers' emotions and desires in designs and commercializes them to complete various images and high-sensitivity marketing strategies, unlike the manufacturing industry.

Product planning capabilities, such as brand value, design, and quality, are crucial factors in the fashion industry's competitiveness. Also included are distribution competitiveness, such as securing a central business district and developing new distribution channels, and price competitiveness through global sourcing. Except for core competencies in overall product planning, such as materials, designs, and patterns, the majority of fashion companies utilize outsourcing systems with domestic and international partners. As a result of the low market entry barriers, diverse needs of consumers, and ever-changing market, competition is fierce. In addition, as a result of the pandemic, a completely different market situation is emerging, as evidenced by the explosive growth of online distribution, extreme deficiencies of global sourcing, and the rapid rise in luxury consumption.

#### Market Outlook

COVID-19 has recently had the most direct impact on the domestic fashion industry. The government's social distancing policies and restrictions on international travel have spawned a phenomenon in which consumers are flocking to outdoor sports, such as golf, and the fashion industry associated with these sports has expanded. This is viewed as a new growth engine for the fashion market compared to the slowdown in market growth that occurred in 2021 due to a decline in consumer sentiment. On the other hand, the luxury market, which has expanded rapidly as a result of the pandemic, is showing opposite offline and online trends. The offline scenario, exemplified by department stores, is still robust, although the bubble is beginning to burst relative to the past, while so-called luxury platforms are once again undergoing rapid change due to the need for authenticity certification and diminishing demand. Unless the COVID-19 pandemic causes another variable, consumer sentiment is anticipated to rebound significantly. Due to causes such as a 52-hour workweek system, a change in lifestyle due to the transition to an aging population, the diversification of distribution channels such as

mobile, the pursuit of a rational consumer culture, and market polarization, the fashion market is becoming more segmented, and there will likely be opportunities to build new business areas in the fashion field.

#### **Future Strategy**

As the fashion industry is sensitive to changes in the economy and trends, it needs to be able to adapt to the changing trend immediately. KOLON INDUSTRIES, as a "brand management house," is working to improve the value and competitiveness of its brands. To this end, it is reorganizing its existing brands, launching and growing new brands, and trying to find and attract new brands from outside the company to create new growth engines. In addition, to be prepared for different environmental risks, we plan to keep developing and increasing the share of products that minimize negative environmental effects such as wastewater, air pollution, and chemicals that can occur during the manufacturing and distribution of products.



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LIFESTYLE INNOVATOR STORY

# Innovative Value Chain Leading to Sustainable Technology, Materials and Products

KOLON INDUSTRIES will conduct research on emerging technologies and materials and apply them in its products to ensure the company's long-term viability. Moreover, as a "lifestyle innovator," we will create sustainable values by accelerating the development of eco-friendly materials, establishing an ecosystem for the hydrogen industry, and operating eco-friendly fashion brands.

Eco-friendly material R&D and securing technology

Expanding eco-friendly materials to ensure

Recycled raw materials applied to up to 20% of total spunbond sales by 2025

nnovation in the ecofriendly hydrogen value chain

Establishment of an ecosystem for the hydrogen industry

House

Manufacturing 50% of all KOLON SPORT products with eco-friendly materials and processes by 2023

Eco-friendliness in the FnC

division and operation of

distribution supply chain

Brand

Management

#### Interviews with internal stakeholders

Group Head (Senior) Hwang Yeong-nam Eco-Friendly Biodegradable Plastic PBAT Base Technology Research Group



Through continuous R&D, quality enhancement, and investments in mass production facilities by 2023, we intend to become a major player in the PBAT production market. In addition, we will save the global village suffering from neglected plastic waste and contribute to the sustainability of the natural ecosystem and human health. (As of 2021, the annual production of plastic is 8.3 billion tons, with 4.9 billion tons neglected.) When plastics are discarded, they end up in the soil or the ocean, whereas the biodegradable product (PBAT) that we develop and manufacture is primarily limited to soil. Accordingly, we are considering the development of polybutylene succinate (PBS), a biodegradable material that can be applied to fishing nets and fishing gear, as a material suitable for use in resolving problems resulting from waste being left in the ocean. In the coming years, we will continue to develop PBS products while simultaneously enhancing the quality of our existing PBAT products and achieving mass production.

Director Lee Moo-seok Hydrogen Fuel Cell Business Manager



As the role of hydrogen energy has been gradually emphasized in recent years, a new industrial ecosystem for hydrogen is being developed, and the importance of materials and components, which are the foundation of the hydrogen industry, is gradually increasing. Based on the membrane technology that we have developed over the past three decades, our company is developing and marketing fuel cell materials and components. This technology is being applied to a variety of fields, including hydrogen automobiles. In 2013, our membrane humidifier for fuel cell vehicles was mass-produced for the first time in the world, expanding the application of this item beyond hydrogen vehicles. Also in the process of commercialization are polymer electrolyte membrane (PEM) and membrane electrode assembly (MEA), which are essential components for generating electricity with hydrogen. KOLON INDUSTRIES' core materials and components businesses can be also expanded to green hydrogen production to prepare the future of hydrogen economy.

Director Jeong II

Recycled Plastic 1 2A Research Manager



To increase the use of recycled raw materials, we are developing and marketing products for the high-performance industrial market, such as tire cords, films for electronic materials, synthetic leather, and SPB, as opposed to the general packaging and apparel markets. As these products exhibit the same performance and quality as products derived from petroleum, we strive to increase the proportion and utilization of recycled raw materials. Currently, ESG management and climate issue are trending topics, so, It is extremely rewarding and meaningful to be able to contribute to the protection of the global environment through the use of recycled products. I believe this should be viewed as a chance to discover new opportunities, rather than a burden. I anticipate that KOLON INDUSTRIES will be able to demonstrate how society and businesses can grow together through this endeavor.









business sustainability

Achieving sales of KRW 1 trillion across hydrogen-related industries by 2030







RE;CODE was founded as a pioneer in the fashion industry in 2012, when the term "sustainable fashion" was unheard of. At that time, sustainable fashion was referred to as "eco-friendly fashion" and "green fashion," which was understood that organic and natural materials were used, but RE;CODE had a different perspective. Being aware of the damage that the fashion industry inevitably causes to the environment, we introduced an upcycling fashion that utilizes stock to create original clothing. Since 2021, "sustainable fashion" has become a trending topic and mega-trend in the fashion industry. Now, customers and other stakeholders are demanding that fashion companies consider and take responsibility for humans, animals, and the environment, as opposed to merely using natural and recycled materials. RE;CODE also aims to respond to this. We will create sustainable values that meet our environmental and social responsibilities while continuing the steady progress we have made over the past decade.



## **RE;CODE & ESG Footprint**

RE;CODE is a conscious brand that helps people live a more conscious life by making clothes that meet their social and environmental responsibilities. Under the belief that the daily act of wearing clothes can be the practice of values for society and the environment, we acknowledge the immense influence of fashion, establish a better relationship with the world through customers who pursue ethical consumption, and create sustainable fashion values.

#### Performance of RE; CODE Sustainability Activities in 2021

Regular Workshop

2021 Target Implementation of transnational collaboration - A collaborative narrative that leads to the value compatibility between EVs and RE;CODE, as well as the product development/exhibition operations of both companies in relation to industrial · 21AW menswear collaboration with designer Jiyong Kim, who aims for sustainable design through Expanded natural weathering and exposure to sunlight Impact Continuation of brand impact and expansion of RE;CODE movement - Disseminating the brand's philosophy through collaboration with single mothers, defectors, refugees, etc. (208 repairs and reforms; 155 participants) External lectures at institutions, corporations, schools, etc. (online lectures at 10 universities; 348 participants) Disseminating the reform and retable culture

#### Digital Communication

Expanding items with sustainable materials applied and propagating a culture of sustainable

- Launched laptop/tablet airbag pouch made of airbag fabric and initiated crowdfunding campaign

- Daelim Art Museum Tong's Atelier, Cheongju Craft Biennale, MBC No More Plastic, Nodeulseom

- Expansion of products made from sustainable materials, such as EQL, Closet Share, and Class 101, and dissemination of sustainable fashion culture

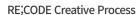
## 2022 Target

Increasing brand impact through sales

Expansion of

social value









#### Research on Art, Fashion, and Spatial Trends Based on Sustainability

- · Research on industrial and recyclable materials as well as innovative sewing techniques Research on vintage furniture, vintage clothing, and contemporary art-related exhibitions and visits to pop-up spaces
- · Visits to domestic/overseas boutiques, Dongdaemun, Gwangjang Market, and business sites

- · Trend survey cycle: More than once a week, more than 5 times a month
- · Converging and reinventing trendy clothing and stock clothing to lay the groundwork for sustainable fashion

#### **Non-Commercial Value Creation Activities**

- · Planning of exhibitions and pop-up stores as well as lectures
- · Collaboration (product design, object design, uniform design, etc.)
- · Conceptualization pertaining to Box Atelier operation

#### Performance

- · Non-commercial value-creating activities: More than 5 times a year
- · Propagating the social value of RE;CODE through non-commercial value creation activities

#### Review Conference Based on Product Planning Directives

- · Research on reusable materials, techniques, patterns and themes
- · Using sales data, evaluating the best/worst products of the season
- · Collecting feedback from RE;CODE domestic/international buyers, managers, and customers

- · Product planning and design conference cycle: More than once
- · Creating sustainable fashion values unique to RE;CODE
- · Finding ways for fashion and sustainability to coexist by developing social and environmental values



#### Review

- · Review attended by all brand personnel, including internal executives, store managers, lead designers, and MDs.
- · Adding designers for collaboration

#### Performance

- · Product show cycle: Biannually by season & constant SPOT evaluation (once a month on
- · No. of collaborations with designers: 48 (accumulated)
- · Development of enhancements reflective of evaluation
- · Human resources to be expanded to lead sustainable fashion together



#### **Design and Sample Making**

- · Creating samples by disassembling and materializing inventory
- · Sample production with the necessary materials and patterns with the sewing instructor
- · Proceeding with sample work order and reverse/retouch of certain products

#### Performance

- · Inspired by vintage clothing, developed a three-dimensional sleeve pattern and patchwork sewing technique
- · Combined eco-friendly dyeing with material recycling consultation



#### Stock Status Check

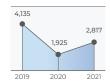
- · Visit Anyang Save Plaza to verify stock levels
- · Select stock, verify quantity, and collect stock

# Performance

· Directly examine the required inventory for design and make use of it to recycle resources using inventory clothing

#### No. of reclaimed stock\*

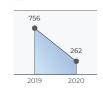
No. of donated stock



garments\*



#### No. of incinerated stock\*



#### QC and Main Work Order Development

- · OC development for quality assurance
- · Proceed with the primary work order

- QC Implementation: More than 10 times a month / Main work order implementation: More than 10 cases a month
- · Enhancement of product quality and QA

## **Sharing Design Applications**

#### Action

· Consultation regarding the design of special tags, labels, packages, and auxiliary

#### Performance

· Annual production of special labels and tags: 20 cases

#### Production

#### Action

- · Based on the date of stock in stores according to domestic/overseas distribution channels, production revenues are determined
- · Carry out inspection and packaging

· Stock clothing reborn as sustainable fashion by RE;CODE

## **Export & On-Off Store Warehousing**

#### Action

- · Store directing, pop-up and exhibition related directing
- · POP design

· RE;CODE sales of sustainable fashion with social and environmental values added to the fashion industry



\*No. of reclaimed stock: This is the number of stock garments used to create RE;CODE garments. RE;CODE garments are created using KOLON FnC's stock clothes; sometimes two or three pieces are used for a single outfit. \*No. of donated stock garments: Stock garments owned by RE;CODE are donated to schools or institutions, as well as to institutions for single mothers, refugees, and people with developmental disabilities to wear, or for educational practice in the fashion departments of universities. / \*No. of incinerated stock: In the case of difficult-to-produce stock clothing due to insufficient quantity or defective products, the stock will be incinerated.



#### RE;CODE Sustainability Data





No. of collaboration designers with whom



No. of workshop participants



No. of clothing donated by RE;CODE



No. of socially concerned individuals working together



No. of repairs and reforms



No. of incinerated stock garments



No. of workshops held to spread sustainable culture



No. of repair and reform clients



\*Accumulated total (number of collaborative designers calculated from 2012; others from 2014)

## Digital Communication with ESG Impact

In 2021, RE;CODE produced a variety of accomplishments with the objective of propagating influence and digital communication. It was a significant year in which we created social value by working with single mothers and refugees, and spread the brand's philosophy through collaborations with diverse industries and campaigns. As a leader in the sustainable fashion industry, RE;CODE will fulfill its responsibilities to the environment and society in 2022, while also expanding its brand's influence and social value.

#### **Economic and Social Values**



- **V** Developing solutions to inventory stock of clothing products and raw materials
- ▼ Spreading economic values of upcycling and scaling up sales
  - W Advancing into domestic and global fashion distribution platforms with eco-friendly, unique brand values



- V Creating sustainable fashion values with reformation & upcycling
- ☑ Creating shared values through social contribution activities linked to the fashion industry
- **V** Collaboration and shared growth with social minorities





#### Interviews with internal & external stakeholders





#### Please explain why RE; CODE is your preferred brand.

Patterns, atypical silhouettes, and materials that are uncommon in the ready-to-wear fashion industry are utilized by this brand, making it attractive to customers. Perhaps that is why I was a customer of the brand when I was in college and am now an intern after graduating. Five years have passed since I first discovered RE;CODE, and I think I have always attracted attention on the days when I have worn RE;CODE clothing. During college classes and internships at other companies, I was frequently asked, "What is this clothing brand?" When I was frequently asked this question, I felt good about myself. It is a brand that looks great on me and others, and I like it so much that it accounts for more than 50% of my wardrobe.

#### Please explain any changes that have occurred in your life as a result of wearing RE;CODE brand clothing.

In the past, I would buy new clothes every season. I didn't wear them once they become out of style, and would keep them in my closet

for a long time before deciding whether or not to get rid of them. In the end, it was a routine to discard the piles of clothes and purchase new ones, but now I am considering how I can combine the clothes I no longer wear to create new outfits. I perform simple length alterations and the attachment of supplementary materials on my own, but for more complex reforms, such as the combination of two garments, I visit the "Box Atelier" run by the brand and make my own custom clothes with the assistance of experts. Aside from that, the idea of bringing clothes to the Box Atelier and having them reformed is exciting if you really like them but they don't fit perfectly or have an excessive amount of detail.

#### Please explain anything you believe to be a positive impact of RE;CODE on society during your internship.

The necessity of ESG management has emerged as a new topic as waste and carbon emissions resulting from the massive amount of clothing inventories that are discarded each year have emerged as significant issues. During my internship, many external companies and brands proposed collaborations with RE;CODE using their inventory. In the fashion industry, RE;CODE is a model that goes beyond the theory of eco-friendly efforts and puts them into practice, and I believe the brand also has a positive impact on society as a good partner. I hope that each of these efforts will provide more people with the opportunity to reduce wasteful consumption and pay attention to discarded clothing and the environment.

Choi Yun-seong **RC Brand Marketer** 



Please explain what you believe to be the most essential message RE;CODE wishes to convey to its customers.

It's all about authenticity. This year marks RE;CODE's 10th anniversary. It is a brand that began by concerning itself about discarded inventory before ESG emerged. We are attempting to disseminate information about RE;CODE's bold actions, which began with a genuine concern for solving problems in the fashion industry and for the environment. believe it is essential to promote a conscious shift toward doing small things for the environment.

#### As a marketer for the RE;CODE brand, please describe the most rewarding and challenging aspects.

The most satisfying aspect is having a fanbase that understands our conscious fashion and movement. In addition, it is exciting to see that the process is carried out not only through RE;CODE's own products, but also through the development of a number of projects in collaboration with other fashion brands from other industries who share our philosophy. The

issue occurs from the limitations of manual labor. As most of the manual labor in the process is performed by hand, relatively higher costs are inevitable. Thus, it is difficult to convince consumers of the value.

#### Please explain the connection between the marketing of the RE;CODE brand and sustainable consumption (eco-friendly and ethical consumption).

We want to focus on the manufacturing process of RE;CODE products. If the unique design and story behind the creation of RE;CODE products are sustainable, the brand will feel more appealing. This will not only foster a positive perception of the RE;CODE brand, but it will also raise awareness of sustainable consumption. It is developed in tandem with sustainable movements in addition to conscious fashion activities. For instance, RE;CODE's "Box Atelier" provides a reform/repair service, which is indicative of a movement that favors longlasting clothing. This is because durability is a sustainable environmental practice.







Historically, industrial accidents were confined to the workplace and resulted in loss of life and property; however, as process facilities have become larger, more complex, and more integrated, industrial accidents have taken on the characteristics of disasters, and the response to industrial accidents today has changed in paradigm to national risk and crisis management level. Strong legal sanctions were implemented in Korea, resulting in the complete revision of the Occupational Safety and Health Act (January 16, 2020) and the enactment of the Serious Accidents Punishment Act (January 27, 2022) to reflect the growing social interest and public opinion in response to the recurrent occurrence of serious accidents. Accordingly, KOLON INDUSTRIES will place the utmost importance on the dignity of human life and environmental protection, and will implement environment, health and safety (EHS) management that satisfies stakeholder demands in order to realize social values and ensure business sustainability.

#### "No Compromise On Safety"

The head office established a safety and health organization (Safety and Health Center) as well as an S&H Team and a Safety Diagnosis Team. We conduct our work in accordance with the CEO's safety and health management message, "No Compromise On Safety," and the Safety and Health Center creates and implements specific tasks with the CEO's responsibility and authority for company-wide safety and health management. In March 2021, the company-wide Environmental Safety Committee was convened under the presence of the CEO, and monthly meetings have been held under the presence of the division head ever since. External consultations conducted in 2021 to diagnose the safety and health management system and assess the level of legal compliance on-site. To prevent the occurrence of safety blind spots, we will manage workplace safety by identifying the root cause of safety accidents and the status of workplace safety measures.



#### Safety and Health Center Vision System

Mission

Vision

Placing the utmost importance on the dignity of human life and environmental protection, and implementing environment, health and safety (EHS) management that satisfies stakeholder demands in order to realize social values and ensure business sustainability

"Remarkable transformation of the EHS Risk-Free system through New Way challenge"

#### Safety culture

- Strengthening control tower function
- Creating a safety and health "open it" cultur
- Establishment of system for reporting accidents
- Establishment of autonomous safety culture "3S"

#### Safety and Health Risk Zero

- 50% reduction in safety accidents ↓
- Alignment of "site = procedure = action"
- Preemptive EHS diagnosis

#### Sustainable environment

- Carbon neutral strategy
- Active response to environmental regulations
- Overall environmental management

Core Values Promoting employee safety an ethi

Promoting employee safety and health, a sense of environmental preservation responsibility, ethical conduct, and independent work









#### **Economic and Social Values**

Economic Values

- V Creating jobs related with safe industrial site management
- V Saving on social costs on the mid- to long-term by reducing injuries and diseases among

Social Values

- ☑ Strengthening business owner's responsibilities and roles regarding industrial accident
- V Creating value for shared growth by expanding the scope of safety control to include business
- activities

#### Safety and Health Management Regulations

- Establishment of Safety and Health Management System (organization)
- Safety and Health Tasks Plan
- · Safety and Health Management System
- · Safety and Health Management Company Standards
- Safety and Health Training
- Hazard and Danger Prevention Measures
- Prevention of Industrial Accidents During Contracting
- Safety and Health Measures for Contractors
- Measures Regarding Hazardous and Dangerous
- Measures Regarding Hazardous and Dangerous
- Measures Regarding Asbestos
- Employee Health Management
- Rewards and Discipline
- Accident-Free Movement
- Management of Key Performance Indicators (KPI)

#### Interviews with internal stakeholders

Director Lee Sang-geun Safety and Health Center (Director of Safety and Health Center)

#### Please explain KOLON INDUSTRIES' top priority for safety and health management.

By instituting a safety and health management system and fostering a culture of safety, we aim to eliminate all health and safety hazards from our workplaces. We are continuously enhancing the system in order to integrate safety into all business processes. For instance, this year we implemented a plant operation approval system that incorporates safety analysis at all stages of investment and operation. In addition, various activities are planned and implemented in line with the headquarters and business sites to enhance the safety culture. Representative activities include a reward system for safe workplaces, 3S activities (Safety Day, Safety Talk, and Safety Golden Rule), and a campaign to eliminate workplace accidents.

#### Please describe the accomplishments in the field of safety and health in 2021 and 2022 that you wish to share with stakeholders.

Beginning in 2022, a safety and health center has been established at the headquarters to conduct professional and systematic safety

diagnosis. A new/expanded safety diagnosis process consisting of pre-safety diagnosis, on-site safety diagnosis, and plant operation approval system is implemented and operated, while the current process is subject to quarterly themed safety diagnosis. Consequently, safety and health are ensured by incorporating safety factors throughout the entire plant investment, design, and operation cycle. In addition, targets are managed by evaluating the risk level and quantifying the contribution to safety improvement for each identified matter requiring improvement. Through this, KOLON INDUSTRIES will continue to maintain a workplace free of serious industrial accidents.

#### Please describe the differences between KOLON INDUSTRIES' response prior to and following the implementation of the Serious Accidents Punishment Act.

The Safety and Health Center, a dedicated organization, embodies the safety management philosophy of the CEO, and this philosophy is effectively and organically communicated to employees, thereby increasing their safety consciousness. This has served as an opportunity to improve and standardize safety and health management, which varied between workplaces. In addition, objective safety inspection activities by the head office's safety and health center were bolstered to effectively identify and eliminate harmful risk factors at workplaces. As safety improved in previously overlooked areas of safety and health management, the opportunity arose to reorganize the safety management system with business partners and KOLON INDUSTRIES' business sites.



# LIFESTYLE INNOVATOR APPROACH

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Having established an "ESG Management Policy," KOLON INDUSTRIES is promoting company-wide ESG management to practice sustainable management by internalizing ESG and contributing to the creation of a sustainable future. We will implement sustainable management by selecting key tasks based on the five core sustainable future and establishing a sustainable management system.

## **ESG Management Implementation System**

#### **ESG Management Policy**

Kolon Industries

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We have established our ESG management policy and a promotion strategy for ESG management. ESG management is implemented systematically by subdividing it into five core strategies and 16 priority tasks.





# MATERIALITY ASSESSMENT

A materiality test was undertaken to identify important ESG management concerns influencing corporate management and to comprehend the interests and expectations of diverse stakeholders, and eight material issues were identified for 2021.

## **ESG Management Issues**

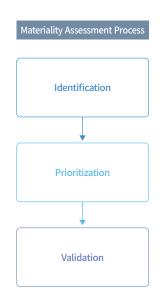
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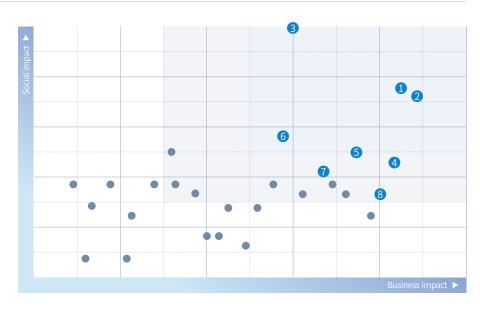
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KOLON INDUSTRIES has selected eight material issues based on the social responsibility issues of ISO 26000 by considering social and business impact and measuring the impact and expectations of stakeholders as social impact. Environment, labor practices, fair operation practices, and governance were chosen as the most important ESG management issues. Compared to the previous report, the soundness of corporate governance and transparency were highlighted as new material issues, and the same was true for major environmental and social issues. Performance data is available to view from the LIFESTYLE INNOVATOR FACTBOOK.

#### **Material Issue Selection Process**

The priorities were determined based on the level of interest of international community and the impact on the businesses by stakeholders. The social impact was measured in consideration of global sustainability goals, the frequency of media exposure, benchmark companies, and domestic and international standard issues, whereas the business impact reflected survey results from 375 major internal and external stakeholders.





No	GRI Standard	KOLON INDUSTRIES ESG Management Issues	Related Stakeholders Group	Report Page
0	306-3	Hazardous chemicals management and waste reduction to prevent pollution	Customers, Stakeholders & Investors, Association, NGO & Local Community, Partners, Employees	46~49
2	306-4	Product innovation by using sustainable resource	Customers, Stakeholders & Investors, Association, NGO & Local Community, Partners, Employees	39~42
3	305-5	Strategic climate response through carbon neutrality	Customers, Stakeholders & Investors, Association, NGO & Local Community, Partners, Employees	46, 50
4	401-2, 404-3	Establishing employment stability and providing fair performance evaluation and compensation	Stakeholders & Investors, Government & Media, Employees	62, 64
6	205-1, 2	Prevention of power abuse for personal benefit and anti-corruption	Customers, Stakeholders & Investors, Association, NGO & Local Community, Partners, Employees	27~29
6	414-2	Empowering ESG in supply chain	Customers, Stakeholders & Investors, Association, Government & Media, Partners, Employees	67~68
7	403-1	Building a safe and pleasant work environment and monitoring health risks of employees	Customers, Stakeholders & Investors, Association, Government & Media, Partners, Employees	52~55
8	Non-GRI	Securing sound governance and transparency	Customers, Stakeholders & Investors, Association, Government & Media, Association, Partners, Employees	24~26

## **Stakeholder Participation**

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Customers, shareholders/investors, government/media, associations, NGOs/local communities, business partners, and employees are the key stakeholder groups identified by KOLON INDUSTRIES. We establish communication channels with KOLON INDUSTRIES' stakeholders in order to collect their feedback, incorporate it into our business activities, and generate shared values.

#### Stakeholder Communication Channel







Government & Media









R	elated Materiality Issues
	Protecting customer health and safety by ensuring product safety
C	ommunication Channel
•	Receiving client opinions
	Customer satisfaction



Securing sound

transparency

Systematizing

process in

decision-making

consideration of ESG

governance and

#### Related Materiality Issues Related Materiality Issues

- Equal opportunity and respect for all, including vulnerable groups, as well as the establishment of anti
  - discrimination systems Human rights protection and prevention of infringement

# Related Materiality Issues

Association

- Expansion of Creating jobs cooperative and improving partnership with competitiveness in stakeholders local community
  - CSR activities and input of necessary resources

Related Materiality Issues

NGO & Local

Community

- Empowering ESG in supply chain
- · Promoting fair trade and competition

**Partners** 

# Related Materiality Issues

**Employees** 

- Related Materiality Issues Establishing
  - employment stability and providing fair performance evaluation and compensation
  - Building a safe and pleasant work environment and monitoring health risks of employees

**Communication Channel** 

- tion
- Product liability monitoring

#### Communication Channel

- · General meeting of shareholders
- Performance announcement
- · Business briefing
- · Announcement of financial information.
- Credit rating

#### **Communication Channel**

- · Policy briefing
- Press release

#### Communication Channel Expansion of

- cooperative partnership with stakeholders

## Communication Channel

- · Employees and voluntary groups
- Local talent recruitment fair (Temporarily postponed due to COVID-19)

#### Communication Channel

 Newsletters Win-Win Committee

#### Labor-Management Council

- Newsletters
- Intranet
- Company newsletter
- Occupational Safety and Health Committee
- Employee survey

# **GOVERNANCE**

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By regulating the interrelationships between the company's various stakeholders, sound corporate governance facilitates the company's sustainable growth. Through transparent and sound governance, KOLON INDUSTRIES will co-create sustainable value with its stakeholders

## **Governance Principles**

#### Corporate Governance Principles and Policy Direction

In order to protect shareholder value and ensure the transparency, stability, and soundness of the governance structure, which is the foundation of corporate management, KOLON INDUSTRIES establishes and implements relevant policies.

#### Shareholder-Friendly Policy

Four weeks prior to the general meeting of shareholders, the date, time, and agenda of the general meeting are posted on the Financial Supervisory Service's Electronic Disclosure System (DART) and Korea Exchange Disclosure System (KIND) in order to help shareholders fully review their voting rights before exercising them. In addition, in order to improve the environment for shareholders to exercise their voting rights and to encourage participation in the general shareholders' meeting, the general shareholders' meeting is held avoiding the concentrated days of the shareholders' meeting, and a voting proxy system is implemented in order to ensure a quorum and make it easy for shareholders to exercise their voting rights. English disclosure is made on the KIND and IR data such as performance briefings posted in both Korean and English on our website in order to provide sufficient corporate information to foreign shareholders. In order to further enhance domestic and international shareholders' understanding of the company, we conduct visiting IR and conference calls on the agendas of general shareholders' meetings, business performance, and major investments.

## Shareholder Return Policy

Shareholder Return Policy and Future Plans To increase the predictability of investors' shareholder returns, we consider business performance as the primary basis for determining dividends, in accordance with the fundamental principle of "pursuing active" shareholder return for profits generated by corporate growth." Shareholder return is planned with a dividend payout ratio of 20% to

40% of real net income\*, and for stable shareholder return, dividends can be determined based on the previous year's dividend even if return resources are insufficient.

\*Real net income excludes one-time gains and losses from separate net

**Shareholder Notification Method** The standard date of confirmation of right shareholders at the annual general meeting of shareholders is announced 10 business days prior to the date of account settlement as a guide for the confirmation of right shareholders in accordance with the dividend decision. In addition, the dividend base date is specified in the articles of incorporation, and cash and in-kind dividend decisions are disclosed when the Board of Directors approves the dividend plan. As a result of the shareholders' meeting, dividends are paid within one month, and shareholders are notified in writing of the dividend payment details before the dividend is paid.

Shareholder Return Status and Plans to Improve Shareholder **Return Policy** Dividends have been paid every year from the 1st term (2010) to the 12th term (2022). In our business report, we disclose the dividend indicator for the previous three years and the dividend status for the previous five years. As a guiding principle for decision-making, the shareholder return policy considers various internal and external factors that can have a significant impact on policy establishment, such as uncertainty in the business environment, financial capacity, and investment plans, and establishes a dividend level that meets shareholders' interests as closely as possible. When evaluating dividends, the Korea Composite Stock Index (KOSPI), the same industry and competitors' dividend rates and dividend payout ratio serve as the primary basis for our evaluation of the company's dividend policy. We will notify shareholders via a variety of channels if the relevant policy changes.



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Category	Name	Gender	Position	Tenure	Area of Expertise	Main Career
Chairperson	Hee-Goo Jang	Male	- Chief Executive Officer, President (manufacturing division) - Chairperson of the Board of Directors - Chairperson of the Outside Director Candidate Recommendation Committee - Chairperson of the Management Committee	2021.03.29* ~2024.03.29	Corporate management	- Chief Executive Officer of KOLON PLASTICS, Inc. - Chief Executive Officer of KOLON BASF innoPOM, Inc.
Inside Director	Seok-Jin Yoo	Male	- Chief Executive Officer, President (FnC division) - Member of the Management Committee	2021.03.29 ~2024.03.29	Corporate management	- President of KOLON, Inc. - Head of Management Strategy of KOLON, Inc. - President of the Investment Division of SBI
	Gwang-Bok Yoon	Male	Vice President/Head of Management Support Department (manufacturing division) - Member of the Management Committee	2020.03.25 ~2023.03.25	Accounting, financing	- Head of Business Management of KOLON, Inc Head of Management Support Department of Manufacturing Organization of KOLON INDUSTRIES, Inc.
Outside Director	Gi-Yong Bae	Male	- Chairperson of the Audit Committee - Member of the Outside Director Candidate Recommendation Committee	2020.03.25 ~2023.03.25	Accounting, financing	Partner of Deloitte Korea - Deputy President of Deloitte Korea
	Je-Won Lee	Male	- Member of the Audit Committee	2021.03.29* ~2024.03.29	Administration	- Head of Urban Regeneration Office of Seoul Metropolitan Government - Vice Mayor II for Administrative Affairs of Seoul Metropolitar Government - Customer relations representative of Haeahn Architecture
	Hee-Gon Eun	Male		2022.03.29 ~2025.03.29	Human rights	- Director of Oh- woon Cultural Foundation - Chairman and representative of Peace Dream Forum
	Ok-Jeong Kim	Female	Member of the Outside Director Candidate Recommendation Committee -Member of the Audit Committee	2022.03.29 ~ 2025.03.29	Accounting, financing	- Chief Executive Officer of Woori PE Asset Management - Outside Director of Kiwoom Asset Management - Special Professor at Sookmyung Women's University Graduate School of Business

\* Reappointed 2022. 05. 31

#### Operational Performance of Board of Directors in 2021

Board of Directors convened	13 times (4 ordinary, 9 extraordinary)
Agendas deliberated or reported	42 cases (25 ordinary, 17 extraordinary)
Average attendance rate (inside/outside directors)	100%

## Composition of the Board of Directors

# Appointment of Inside/Outside Directors According to the Commercial Act

The Outside Director Candidate Recommendation Committee is composed of two of the three outside directors, and directors are appointed in accordance with the Commercial Act. Candidates for independent director must also satisfy the requirements of applicable laws and the articles of incorporation, have no material financial interest in KOLON INDUSTRIES, and be able to independently supervise company management. The Outside Director Candidate Recommendation Committee selects candidates through open discussion among those who meet the qualifications, taking into account the diversity of the Board of Directors members, their respective professional fields, and the company's current principal business areas. It is held irregularly when anticipated vacancies exist due to expiration of tenure or resignation of an outside director. The Board of Directors does not establish a director candidate recommendation committee for the appointment of inside directors in order to select a fair and qualified inside director by involving as many outside directors as possible in the selection of inside director candidates.

# Responsible Management of the Board of Directors Centered on Diversity, Expertise, and Independence

The Board of Directors consists of four outside directors among seven directors, and by providing the outside directors with practical leadership, both internal management and fairness are improved. Specifically, outside directors consist of experts in each field, such as management, accounting, administration, and ethics. They guide and supervise management in all areas of the organization. In addition, we strive to ensure the independence of outside directors by fundamentally excluding the appointment of individuals who may have difficulty performing their duties as outside directors faithfully or who may exert an undue influence over management. Internal directors are also primarily composed of executives tasked with making quicker and more accurate decisions in light of the industry situation in various business areas.

## Operation, Evaluation and Performance Compensation of Board of Directors

#### Operational Status of Board of Directors

Kolon Industries

2021 Sustainability Report

Articles of Incorporation and Board of Directors operation regulations have been enacted and adhered to in order to clarify the board's authority and responsibilities and ensure their efficient operation. In accordance with the Board of Directors' regulations, ordinary board meetings are held on a quarterly basis, and extraordinary board meetings are held in response to the occurrence of irregular board meeting agendas. In accordance with the articles of incorporation, the Board of Directors is convened by each director, and the date, location, and agenda of the meeting are communicated to each director at least one day prior to the convening date. In accordance with the articles of incorporation, a director who is unable to attend may also be permitted to participate in a vote by means of communication that allows all directors to simultaneously transmit and receive their voices. By limiting the exercise of their voting rights, directors with a vested interest in the agenda are institutionally prevented from influencing the agenda.

#### **Board of Directors Evaluation**

For the improvement of corporate governance and the long-term growth and development of the company, we evaluate the overall activities of outside directors based on criteria such as meeting attendance, contribution, professionalism, and independence. The results are used as a basis for improving support for outside director activities and the board's and committees' efficacy. However, as it is determined that calculating compensation and deciding reappointment according to the evaluation results of outside directors could hinder the independence of independent director activities, compensation and reappointment decisions for outside directors are unrelated to the evaluation. The annual evaluation of outside director activities is based on criteria such as meeting attendance, contribution, professionalism, and independence, and the results are used to support outside director activities and enhance the effectiveness of the Board of Directors and committees.

#### Roles and Operational Status of Committees within the Board of Directors

Committees	Roles	Composition	Meetings	Deliberation	Purpose of Installation
Outside Director Recommendation Committee	Review and selection of candidates for outside directors to be voted on from the general meeting of shareholders and recommendation to the Board of Directors	3 (2 Outside directors, 1 Inside director)	2 times	2 cases Attendance 100%	- The committee held a meeting on March 29, 2022 to discuss the appointment of new external directors to fill anticipated vacancies  - Recommended candidates Hee-Gon Eun and Ok-Jeong Kim, and appointed as outside directors
Management Committee	Deliberation and resolution on matters delegated by the Board of Directors that are not required by the law or articles of incorporation	3 (3 Inside directors)	51 times	75 cases Attendance 100%	- 75 cases resolved in 2021
Audit Committee	Supervise exhaustively the accounting- related job performance of directors and management, including auditing accounting and major business tasks and assessing the operation status of the internal accounting management system	3 (3 Inside directors)	6 times (4 ordinary, 2 extraordinary)	16 cases (14 ordinary, 2 extraordinary) Attendance 100%	-Convened 6 meetings in total throughout 2021 to deliberate and report -Approval of financial statements, etc. reported as agendas for the general meeting of shareholders based on the review of the Audit Committee

## **Board of Directors Performance Compensation**

Inside directors are compensated based on an assessment of their performance in accordance with the executive remuneration payment regulations. In accordance with the Commercial Act and the articles of incorporation, all outside directors receive the same amount of compensation within the total director compensation approved by the general shareholders' meeting. Monthly compensation is limited to other business-related expenses, such as the basic salary and actual business expenses. Separate compensation, such as bonus pay, is not included. In the annual business report, compensation details for outside directors are disclosed based on the number of employees and the total amount paid. Articles of incorporation stipulate that stock options may be granted to

all executives and employees, including outside directors, through a special resolution at the annual meeting of shareholders. Currently, however, directors do not receive separate stock options.

# **ETHICS & COMPLIANCE**

Kolon Industries

2021 Sustainability Report

Efforts to institute ethical management become a competitive advantage to companies to create sustainable values in each area, such as the economy, society, and environment. KOLON INDUSTRIES has established a compliance policy and system in accordance with international standards to address the compliance management requirements.



## **Ethics & Compliance Policy**

"Can the criteria for evaluating value and the nature of actions be proudly disclosed?"

- Excerpt from employee code of conduct

As a responsible corporate citizen, in order to share the vision of ethical management with all executives, employees, and stakeholders and to establish an ethical management culture, the "KOLON INDUSTRIES Code of Ethics" was created and ethical standards for eight major ethical management were presented. By implementing the "Employee Code of Conduct" and the "Regulations on Protection and Compensation for Reporting," we strive to spread our employees' ethical culture. This Code of Ethics and Code of Conduct were enacted in November 2020, and in relation with the Workplace Harassment Prohibition Act and the ESG management-related amendments to the most recent laws, and latest issues of corporate social responsibility and environmental protection, it has been revised by including specific phrases and examples in January 2022.

## **Compliance Policy**

The self-compliance manual is made and used directly for work, including stepby-step checklists, FAQs containing actual questions, and in-house processes, as well as legal information for each field, to increase employees' self-compliance awareness and encourage practice. In 2021, we disseminated compliance manuals on major compliance issues such as trade secrets and agency divisions, revised various standard contracts for subcontracting and agency divisions, and distributed and provided training on compliance newsletters.

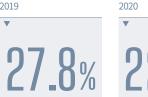


## **Ethics & Compliance System**

#### **Compliance Support Promotion Organization**

The Legal/Compliance team at KOLON INDUSTRIES is responsible for identifying domestic and international laws and system trends and preventing compliance risks in advance. To strengthen the company-wide compliance system, we appoint a Chief Compliance Officer (CCO) who is responsible for compliance and establish and operate a company-wide self-compliance system by establishing the Compliance Secretariat and a TF responsible for compliance at each business division/business site.







#### Proactive Ethical Risk Identification

A group-level ethical management organization was established in 2005 to promote company-wide ethical management activities. The Ethics Management Office conducts internal audits at domestic business sites in order to proactively identify and address potential ethical risks such as corruption and collusion. The percentage of business locations that have undergone an internal audit in 2021 is approximately 33%.

#### **Enhanced Self-Compliance System**

#### [ Operation of anti-corruption management system ]

In 2020, we obtained ISO 37001 (Anti-Corruption Management System), and in 2021, we extended the ISO 37001 established at the headquarters to all domestic business sites. Since the introduction of the Fair Trade Compliance Program (CP) in 2012, KOLON INDUSTRIES has equipped itself with a self-compliance system such as distributing compliance manuals, operating the compliance executive office, and establishing a support system for various areas such as fair trade, trade secret protection, and agency transactions in order to raise awareness and encourage self-compliance throughout the company, as well as to identify related risks, and we plan to further improve this.

#### 2021 Company-Wide Anti-Corruption Goals

1 Settlement of anti-corruption management

Post the anti-corruption management policy, establish anti-corruption goals in all departments, and check implementation during internal audit

2 "Zero" corruption incidents

- Motivate change in awareness so that employees can fully recognize the possibility of anti-corruption in customary tasks
- Each department to independently establish corruption-related risk and management measures and inspect during internal examination
- 3 Promote anti-corruption culture

- Promote anti-corruption management principle and a reporting hotline (call center) by promoting the computer screensaver campaign ("KOLON People's commitment to adhere to the basics and principles")
- Cultural campaign of not receiving holiday gifts
- Sending ethical management letters
- Employee ethical management education (to be hosted by the holding company as a biennial event from 2022)
- -Signing of the ethical management pledge upon employment

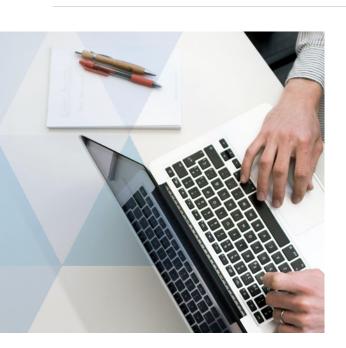


- Domestic business sites: 4-year cycle
- Overseas business sites: 4-year cycle
- \*ISO 37001 audit cycle/frequency: Internal/external audit once a year









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#### **Newsletter Contents**

Issue Date	Details
2021.05.04	Reward for whistleblowing
2021.06.08	A survey result on change in "Open-It" awareness
2021.08.03	Sharing a result of unannounced security audit
2022.02.24	News Brief Collections (Regulation revision, cost review result, etc.)

## **Promotion of Ethics & Compliance Culture**

## Training and Promotion of Ethical Management Culture

KOLON INDUSTRIES has developed and provided various systems and training programs to enhance an ethical culture of integrity that employees can experience. To share the group's ethical DNA, we conduct group-level online ethics training biennially for all employees. We also provide ethical training materials for each department and conduct dissemination training for employees who have difficulties in using PCs, such as field workers. Moreover, we provide various ethical education content on ethical management on a regular basis every year. To spread this throughout the value chain, we are making efforts to advance ethical management by sending out ethical management newsletters to our business partners. In addition to our corporate-level activities, we have made and issued "KOLON INDUSTRIES Ethical Management Newsletter" since 2021. With an aim to promote ethical management culture, we have issued four newsletters: three in 2021 and one in 2022.

#### **Compliance Education**

KOLON INDUSTRIES intends to share tips on employees' voluntary practices of compliance policy and thereby promote a culture of compliance by providing compliance education by sectors and distributing compliance letters to employees. Compliance education and newsletter gives a better understanding on compliance, containing the work-related recent trends of domestic and overseas laws and systems along with examples. In the 2021 compliance letter, we shared information on bond management (liability), termination of a contract with EU member agent, prohibition on unfair services, implementation of the Serious Accidents Punishment Act, reform of corporate standards and internal audit, and unfair collaborative acts. And in 2021 compliance training sessions, we made efforts to prevent compliance risks in advance by sharing major laws, regulations and case study on subcontracting transactions, protection of trade secrets, agency transactions, etc.

#### **Ethics Report and Action**

KOLON INDUSTRIES' ethics reporting program shares the ethical reporting platform on the group's ethical management website. In addition, we receive reports through various ethical reporting channels such as our own reporting site (www.인제오픈잇.com), mail, phone call, and e-mail. For a filed report, we follow the principle of strict security and protection for informants in accordance with the "Protection and Compensation Regulation for Reports." In addition, any act that exposes or implies identity without the consent of the informant is prohibited by the informant protection principle. If any activity of searching to identify the informant is detected, severe disciplinary action will be taken under the internal disciplinary regulations. For cases of receiving inappropriate gifts or money from stakeholders in the course of business, we have established and are implementing procedures to fill out a gift receipt report form and report the incident to the Ethics Management Office. In the gift receipt report, the provider and the content of the provision are recorded and managed, as well as the process of receipt and processing. In order to disseminate this culture of giftreceipt notification, we are implementing campaigns to promote this culture to partner companies and are operating gift-receipt notification centers for each business site.

#### Status of Gift Receiving/Processing under the Campaign for Ethical Holiday Management

Classification	2019	2020	2021
No. of cases	11	13	19



KOLON INDUSTRIES considers information protection and privacy the important factors directly affecting the company's credibility. In addition, the leakage of national core technologies, national high-tech strategic industry technologies and trade secrets may cause serious loss not only to the company but also to the nation. Accordingly, we have promoted a security culture and extended the corporate system to the security area, acknowledging the significance of a stronger protection over key information assets.

## **Information Security Policy**

#### Information Protection Policy

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In 2021, we have appointed the Chief Information Security Officer (CISO) to empower the organization and solidified the foundation of information security principles through revision of security management regulations. In addition, we are making active efforts to establish a security culture by raising members' awareness on security through continuous security education.

National Core Technologies KOLON INDUSTRIES manages its core technologies in accordance with the standard for protection measures of national core technology as we retain national core technologies. As a result, we have received "excellence" evaluation in the government institution's national core technology security survey in 2021, in acknowledgment of our high security level. We also implement and manage asset-specified protective measures after identifying assets of a core technology (workforce, document, facility, etc.). In particular, we work jointly with relevant teams from the establishment of security policies to protective measures, audit, follow-up measures and improvement for effective operation of its management system.

Prevention of Security Incident To prevent security incident, we carry out various activities ranging from security log record management to alltime monitoring, survey on business sites security and simulated training of malicious emails. Moreover, we limit the use of software and peripheral devices of PC that are deemed to be maliciously used for document leakage and periodically monitor them. For any suspicious act, we conduct forensic analysis for the management and achieved zero external intrusion and zero internal information leakage.



## **Information Protection System**

#### **Integrated Information Protection Solutions**

KOLON INDUSTRIES adopts various security solutions in order to prevent information leakage and counteract an external hack attack. We also manage and analyze integrated security logs collected from each security solution. In addition, we aim at responding to security incidents by developing our risk detecting system, and operate an all-time monitoring system which enables real-time detection and prompt response in the event of an external intrusion through cooperation with the cyber security control tower within the group. Our internal network is only accessible by authorized personnel thanks to firewall and the Intrusion Prevention System (IPS). Furthermore, we adopt an essential security solution management policy requiring device control, network access control and anti-virus software to be installed on computers to guarantee access to only authorized personnel. And to prevent the leakage of internal information, we manage printouts with DLP, document centralization and DRM.

#### Information Protection Process

KOLON INDUSTRIES analyzes the entire life cycle from the collection stage to the destruction stage of personal information and applies optimal technical and administrative protection measures at each stage to prevent persona information leakage in advance. KOLON INDUSTRIES has applied security management regulations to all tasks that handle personal information such as recruitment, website usage, access to head office, and asked for consent to collect and use personal information through related systems including 'Personal Information Collection and Usage Agreement'. It provides information on personal information items to be collected, purpose, retention period, and the details of provision to the third party in addition to the right to refuse consent. We request confidentiality pledges according to the characteristics of business and stakeholders, and receive inquiries related to personal information protection arising from using products or services by specifying the person in charge of personal information protection.



We plan to analyze the relationship with other systems to check for possible problems when personal information is destroyed and to notify the parties concerned about the destruction of personal information, thereby enhancing the trust of stakeholders in the information security management system.

#### **Document Protection Process**

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It is designed to manage a life cycle of a document. We have operated a DRM and document management system to manage grades and set retention periods for document when creating, processing, and storing document. In addition, we have operated an external mail approval system to detect the leakage of document through e-mail. In 2021, we have established a stable system by upgrading the DRM to enable SW support for latest version of document and ease of use.

## **Information Security Training**

In 2021, we have provided online information security training to all employees. Every quarter, we conduct mock training on how to respond to malicious emails, and for those caught during training, we conduct online training and tests to prevent email security incidents, prevent recurrence, and inform them of email security rules. For newly hired, existing, and retiring employees, it is compulsory to sign the non-disclosure agreement. When jointly carrying out a project with a supplier or an external company, we also require an non-disclosure agreement. For employees handling national core technologies, we provide a special training on the management of national core technologies in addition to the companywide security training.

## **Security Reporting Process**

If a security incident is suspected or identified, it should be reported immediately by phone or email to the company-wide security officer.

The process entails four steps: "Preparation → Detection/Analysis → Treatment and Recovery → Post-response" for responding to security incidents after they

#### Information Protection Measure System

#### **Technical Protection Measures**

- Document Security System: Identifying a grade and retention period of document and use in a security management system
- Information Leakage and Threat Monitoring System: Enabling monitoring of information leakage and threat through scenario-based detection and identification of trend by categories through comprehensive situation judgment
- · Access Control: Enabling access control extending from access to network area to information system via network firewall, cloud-based security group setting and connection port control
- Encryption: Applying encryption in SSL communication, using SHA256 one-way encryption for password, and applying AES256 two-way encryption for personal information of financial data
- Introduction of two-factor authentication (2FA)

have been reported. The causes of accidents are analyzed in order to prevent recurrence, and we conduct a post-response review to incorporate any changes to the response system and regulations.

#### Managerial Protection Measures

- Log Management: A record of logging into and use of information system is monitored on a monthly basis to identify any abnormality
- Authorized Economic Operator (AEO) Safety Management
- PC Security: Employees are required to use AD and install device control, and in particular, IT development personnels are asked to access with the blocked internet network by logical network segmentation
- Account Authority Management: Information system is accessible via account application and approval, and unnecessary account authority is suspended every
- Vulnerability Inspection: A vulnerability in information system is diagnosed through annual risk evaluation and is resolved by establishing an improvement plan
- Simulated Hacking: Improving technical vulnerabilities on system and website by conducting simulated hacking



financial reporting

# **RISK MANAGEMENT SYSTEM**

KOLON INDUSTRIES implements a risk management process considering stakeholders by extending the scope of risk management from the traditional financial area to the non-financial area which may seriously affect our business.

## **Risk Management Process**

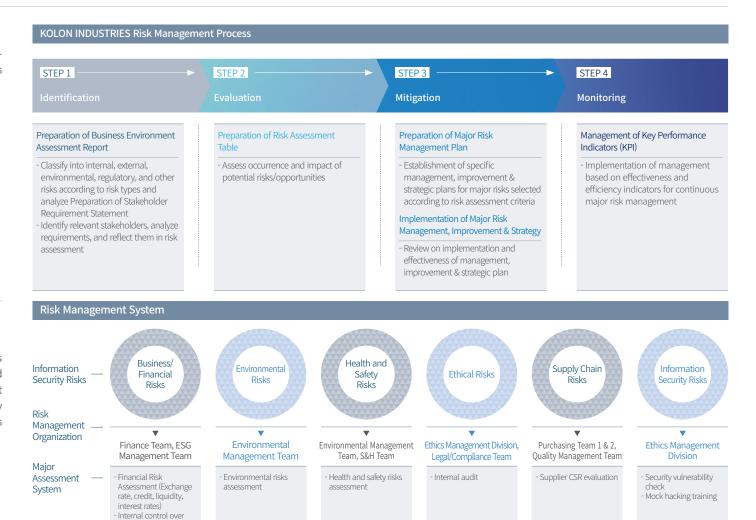
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KOLON INDUSTRIES operates a risk management process in four stages — identification, evaluation, risk mitigation and monitoring — and relevant activities are implemented for each stage.

# Risk Management Map

KOLON INDUSTRIES largely identifies six risk management areas in business and financial risks; environment; safety×and health; ethics; supply chain; and information security. Risks therein are controlled based on the risk management regulations. We are continuously improving risk management to appropriately respond to sudden risks such as COVID-19, and responding to identified risks with company-wide management strategies.



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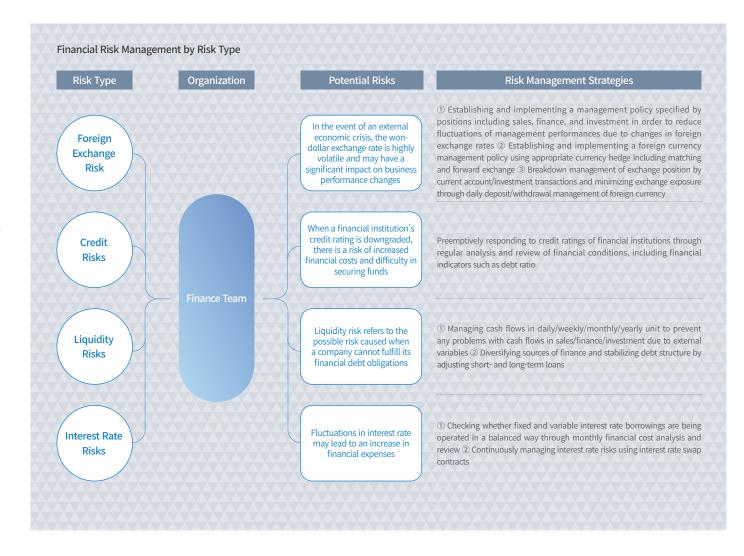
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#### **Financial Risks**

KOLON INDUSTRIES analyzes the risks it faces and sets appropriate control measures to establish and operate effective financial management policies by identifying financial risks such as foreign exchange risk, credit risk, liquidity risk, and interest rate risk.

Internal Control Over Financial Reporting KOLON INDUSTRIES have conducted design and operation evaluations according to 2021 annual evaluation plan of the internal control of financial reporting. We have improved the efficiency of our internal control over financial reporting by additionally carrying out due diligence on inventory of previous year and capital-related control. An independent audit by an external auditor revealed no significant weaknesses or significant deficiencies in the internal accounting management system, which is effectively designed and operated. We are promoting a significance of internal control over financial reporting by reflecting employees' evaluation of performance and providing education on internal control over financial reporting. In 2022, we plan to minimize the company's financial risks by completing the establishment of a consolidated internal control over financial reporting scheme and by substantially supporting the control operation of domestic and overseas affiliates.

The internal accounting management system is an accurate and reliable system for preparing and reporting financial data. KOLON INDUSTRIES has implemented a control system for the entire process, including sales, production, and funds, in order to prevent financial fraud risks and financial statement distortion.



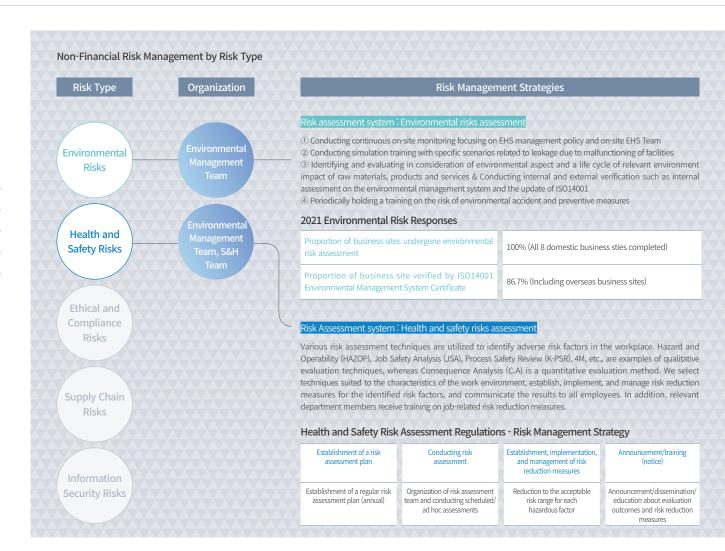
#### Non-Financial Risks

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KOLON INDUSTRIES identifies non-financial risks that may arise in the course of business by types based on the systematic risk management system and develops preemptive measures. We seek to minimize those risks through periodic monitoring and implementation of countermeasures.

- → Environmental Risks
- → Health and Safety Risks
- → Ethical and Compliance Risks
- → Supply Chain Risks
- → Information Security Risks



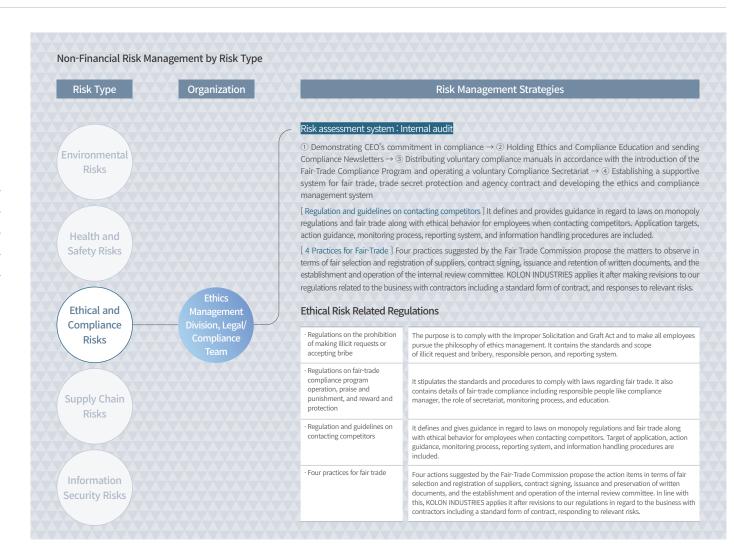
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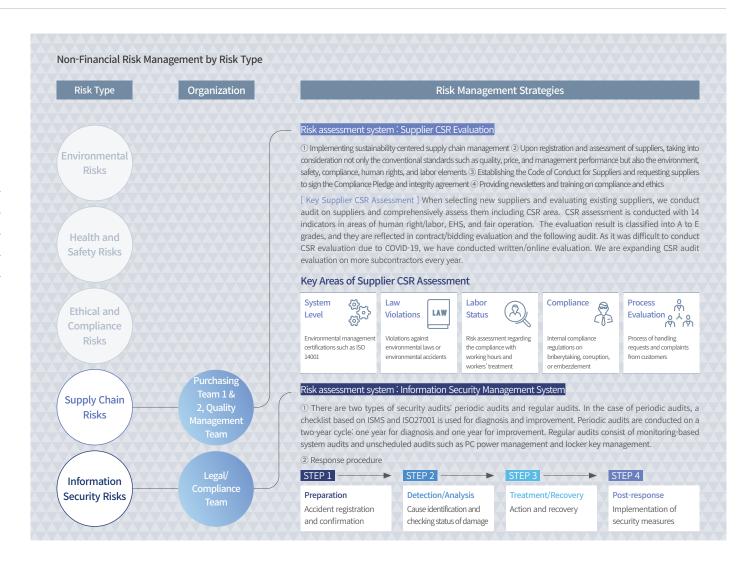
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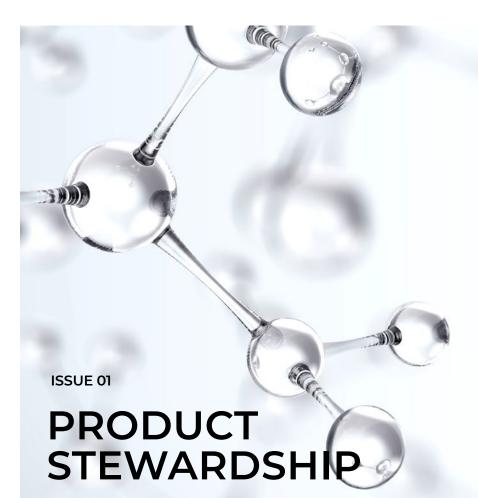
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- → Health and Safety Risks
- → Ethical and Compliance Risks
- → Supply Chain Risks
- → Information Security Risks





# LIFESTYLE INNOVATOR FOOTPRINT

PRODUCT STEWARDSHIP	38
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SAFETY AND HEALTHY SITES	51
WORK AND LIFE BALANCE	56
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Product liability encompasses development of eco-friendly, high-efficiency technology, ensuring quality and safety of a product and efforts to mitigate harmful substances and pollution based on the company's sense of responsibility over its product, thereby contributing to the future sustainability. KOLON INDUSTRIES has been committed to pursuing quality innovation to make high-quality products while expanding eco-friendly new businesses by developing eco-friendly materials and hydrogen-based technologies.



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#### **RISK & OPPORTUNITY**

of pollution have been highlighted. In that sense, the related technological prowess and product chain and eco-friendly materials as future businesses of enhancing customers' quality of lives. We have also improved the stability of a product by acquiring and maintaining quality management

#### **RELATED MATERIALITY ISSUES**

- TARGET 2022 R&D Investment and Manpower Plan: Investment of KRW 56.8 billion and manpower of 284 people
  - Applying renewable materials by 20% of the total Spunbond sales by 2025
  - Achieving the sales of KRW 1 trillion across hydrogen-related industries in 2030

#### 2021 PERFORMANCE



Acquired an "Environmental Product Declaration" certificate on spunbond product for the first time in Korea





Won "Environment Minister's Award" in recognition of promoting eco-friendly technology and encouraging





Improved quality loss rate compared to 2021







KOLON INDUSTRIES will establish a technological innovation system that improves existing technologies and researches and develops new technologies in order to keep pace with the rapidly changing business environment.

#### **Technology Innovation Performances**

Kolon Industries

2021 Sustainability Report

Hydrogen

Possessing core material and component technologies such as membrane humidifier for hydrogen fuel cell that generates electricity for hydrogen mobility, polymer electrolyte membrane (PEM), and membrane electrode assembly (MEA)

Recycled Plastics



Succeeded in the development of long fiber non-woven fabrics such as spunbond, film, and Chamude using postconsumer recycled (PCR) plastic raw materials for the first time in Korea

Eco-Friendly, High-Tech Material



Succeeded in joint development of "Polybutylene Adipate-co-Terephthalate (PBAT)," an eco-friendly biodegradable plastic that naturally decomposes in soil within six months when landfilled

2022 R&D Investment Plan



2021 R&D Manpower



### Technology Innovation Vision and Strategy

Under the vision of "innovating customer life by providing products and services that improve the quality of life," KOLON INDUSTRIES has established an ESG-oriented mid- to long-term R&D strategy for environmental and social technological innovation. We are promoting technology innovation centered around the four major business sectors of green energy, sustainability, smart mobility, and life innovation. KOLON INDUSTRIES aims to "provide a technology platform as the core of company-wide technological competitiveness" for the group's future growth engine and performs R&D in five areas: green/energy materials, high-performance industrial materials, film/electronics/display materials, mobility materials, and chemicals. Based on leading R&D capabilities and advances in technology, we are committed to research and development of eco-friendly, low-carbon technologies and products beyond responding to the rapidly changing material, chemical and fashion industries. Furthermore, we are striving to lead the customers' needs.

### **Technological Innovation Organizations**

KOLON INDUSTRIES' R&D Division is striving to strengthen its technology and competitiveness to make progress in a timely manner with a goal of achieving sustainable growth of business and R&BD that contributes to ESG by considering the future and creating new values. We also implement various "Next Item" research tasks to discover next growth engines. To this end, we have newly launched Corporate Strategy Office (CSO) which will spearhead the future businesses in January 2022. The CSO department is spanned across Future Strategy Division and EX (Energy X-change) Business Team. In particular, EX Business Team leads a paradigm shift in the energy sector by realizing

development of a technology related to production and storage of hydrogen as well as fuel cell, based on KOLON INDUSTRIES' hydrogen business strategies and legacy. It is also committed to developing a next-generation secondary battery and expanding business portfolios including future energy sources in addition to hydrogen.

#### Securing Future Competitiveness Through Technology Innovation

KOLON INDUSTRIES has pursued various technological innovations in a systematic manner for dedication to R&D of eco-friendly materials including high-tech materials and recycled plastics, for the development of core materials related to the eco-friendly hydrogen industry and for the expansion of new businesses. KOLON INDUSTRIES plans to build a value chain spanning across recycled plastics, eco-friendly materials and core hydrogen materials by enhancing our technological competency in the one and only materials, while seeking a technological paradigm in realization of mitigation of environmental impact and sustainable growth.







### **Technology Innovation Performances**

We have produced results in the development of hydrogen green energy and eco-friendly materials through technological innovation that adds value to the environment. We will achieve sustainable growth in the future through technological innovation.



#### KOLON INDUSTRIES Competitiveness in Hydrogen Fuel Cell

Category	Overview	Technological Competitiveness
Membrane Humidifier	An essential component that maintains constant internal humidity to generate electricity in a hydrogen fuel cell	First place in global market shares: Managing the water and temperature of the electricity generator (stack) and reducing the hydrogen concentration in exhaust gas
Polymer Electrolyte Membrane (PEM)	A key part of the four major components of a hydrogen fuel cell where selective permeation allows only hydrogen ions to pass through	The PEM facility can be used for the production of redox flow batteries for ESS and separators applied to water electrolysis technology for eco-friendly hydrogen production, thereby enabling scalability
Membrane Electrode Assembly (MEA)	A core component that combines a polymer electrolyte membrane (PEM) and an electrode, where chemical reaction that generates electricity in hydrogen fuel cell membranes takes place	Expansion of MEA facilities to enable full-scale mass production from 2022. Fulfilling sufficient conditions to occupy a strategic position in the market expansion period.  As Korea's only company that produces both PEM and MEA, we secured a favorable position in the market expansion period by expanding MEA facilities.

#### **MEA Manufacturing Process**

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- · The MEA production process can be largely divided into the front-end processes of electrode dispersion, R2R electrode coating, and IBL coating, and the back-end processes of transferring, bonding, punching, and assembling with roll-type electrodes, PEM, EPL, and GDL input.
- In contrast to the front-end process of R2R coating, the back-end processes are performed manually, creating a bottleneck for expanding certification.

### Building a Low-Carbon Business by Developing Green Energy Technologies

We strive to lead a hydrogen value chain by dedicating our efforts in building a hydrogen industry ecosystem using our technological competency in the material and parts sector of the hydrogen industry.

① Hydrogen fuel cell — Proved technological competency, succeeded in mass production for the first time in Korea and achieved the first place in global market shares KOLON INDUSTRIES successfully achieved mass production for the first time in Korea and achieved the first place in global market shares based on its unparalleled competitiveness in membrane humidifier, membrane electrode assembly (MEA),

and polymer electrolyte membrane (PEM) necessary for hydrogen fuel cell, an essential part of hydrogen mobility. We will continuously strive to solidify our position as a leader in key material and parts manufacturer by achieving the sales of KRW 1 trillion by 2030 across hydrogen-related industries including production, storage and transportation of hydrogen using water electrolysis technologies with hydrogen fuel cell at the front.

- 2 Next-Generation Secondary Battery Materials It is expected that the secondary battery market will continuously grow with the expanded supply of electric vehicles. Against this backdrop, lithium-ion batteries are widely used today because of their light weight and high energy density which ensure high capacity and high efficiency. However, its use of liquid electrolytes raises concerns about safety, such as a risk of fire and explosion caused by change in temperature and shock. In response, KOLON INDUSTRIES is conducting R&D on new materials which enhance energy density by reducing safety-concerning parts and are structurally stable through the development of solid electrolytes.
- 3 Green Hydrogen Technology Though the energy density of hydrogen per mass is three times that of natural gas and four times that of gasolineand the power generation efficiency of hydrogen fuel cells stands at 47%, hydrogen emerges as the excellent, next-generation, eco-friendly energy source compared to the conventional fossil fuel as it has the advantage that there is nearly no environmental burden as only a small amount of water and nitrogen oxides are emitted. KOLON INDUSTRIES is committed to the production and transportation of green hydrogen for hydrogen production based on renewable energy such as solar and wind power and the development of parts and materials. KOLON INDUSTRIES strives to contribute to realization of innovation in eco-friendly, hydrogenbased value chain and become a pillar of creating a hydrogen ecosystem.

# Expanding Sustainable Material Products by Developing Eco-Friendly Materials

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# $\underline{ \text{1. Development of biodegradable plastics PEF consisting of } } \\ \underline{ \text{100\% plant-based materials} }$

Referring to petroleum-based, biodegradable, high-molecule including biomass-induced high molecule, bioplastics have recently been in the limelight as a next-generation eco-friendly technology that produces plastics from natural products instead of petroleum. KOLON INDUSTRIES' Future Technology Institute develops new biodegradable plastic — Polyethylene Furanoate (PEF) — which is 100% made with plant-based materials. Compared to conventional plastic, PEF generates only half of carbon dioxide. Thanks to its excellent heat resistance and easy blockage of oxygen and moist, it is expected to be widely used for various purposes. In addition, it is committed to secure various technologies enabling transition to plant-based materials for new plastic material application, as well as development of biodegradable plastic which is decomposed in natural environment after use

# 2. Equipping world's second best manufacturing capacity in the hydrocarbon resin manufacturing sector through expanded building of hydrocarbon resin plant

In 2021, KOLON INDUSTRIES has built a production plant with a capacity of 15,000 tons of high-reactive resin, pure monomer resin, liquid hydrocarbon resin and high-performance tire resin which were developed in-house after 10 years of efforts. Marking this achievement, we have become the world's second best manufacturer of hydrocarbon resin with an annual capacity of manufacturing 20,000 tons of hydrocarbon resin.

High-reactive resin has been developed as an eco-friendly, non-hazardous adhesive material that is anticipated to be prominent on the global market. In addition, we are promoting the development of sustainable products and the recycling of raw materials.

#### Expanding Sustainable Material Products by Developing Eco-Friendly Materials

#### Succeeded in commercializing spunbond

Succeeded in commercializing long fiber, non-woven fabric
"spunbond" for the first time in Korea and acquired an
"Environmental Product Declaration" for the first time in the industry



#### Achievement in Development

- Commercialized for the first time in Korea
- Acquired a Global Recycled Standard (GRS) in Jan. 2020
- Acknowledged for our excellent eco-friendliness in 7 environmental impact categories\* designated by the Ministry of Environment

#### Plan for Product Expansion

- Planning to apply renewable materials by max. 20% of the total sales by 2025 to make a product high value-added and achieve differentiation
- \* "Carbon footprint," "Water footprint," "Ozone layer depletion," "Acid rain," "Eutrophication," "Photochemical smog," and "Resource footprint"

02

#### Biodegradable plastic

### Eco-friendly, biodegradable plastic "PBAT"



#### Achievement in Development

- Concluded a strategic partnership with SK Geo Centric in Apr. 2021 and jointly developed ecofriendly, biodegradable plastic "PBAT" which is naturally decomposed after use
- Achieved mass production of PBAT product in Dec.

#### Plan for Product Expansion

- The global PBAT market is expected to grow from 22,000t in 2020 to 80,000t in 2025
- KOLON INDUSTRIES and SK Geo Centric plan to expand production capacity to 60,000t by 2024 in response to the expanded market needs

03

#### HDPE cool feeling material

### Development of eco-friendly HDPE cool feeling material



#### Achievement in Development

- Developed eco-friendly HDPE in which harmfulness to body and cool feeling function have been improved compared to conventional cool feeling materials with sweat-absorption and quick-drying\*
- Safe to be used for children by acquiring OEKO-TEX® Standard 100 Class 1, an environmental label for textiles
- Continuously expanding the market with cool feeling fabric

#### Plan for Product Expansion

- Planning to preemptively responding to a premium cool feeling material market by expanding our annual production to 4,500t by 2029
- Dedicating to R&D in a multilateral aspect to provide various functions
- \* Dries by absorbing sweat

### Expanding Sustainable Material Products by Developing Eco-Friendly Materials

04 ——Hybrid material

Hybrid tire cord material overcoming technological limits

Kolon Industries

2021 Sustainability Report



#### Achievement in Development

- Secured intellectual property right after developing a hybrid structure with the world's best performance that is unique to KOLON INDUSTRIES by overcoming traditional technological limits of making hybrid and life year structures different
- Expanded sales since its commercialization in 2015
- The market is expected to continuously grow as it realizes excellent driving safety when applied to electric vehicles

#### Plan for Product Expansion

- Building a foundation for the global market expansion of Aramid to enhance competitiveness in vehicle and tire
- Planning to dominate the market by leading the development of a global tire cord technology

0.5

Development of thermosetting resin

Development of eco-friendly thermosetting resin using biodegradable byproduct



#### Achievement in Development

- Succeeded in development and commercialization of eco-friendly material lignin\*-using resin based on biomass in replacement of conventional petrochemical materials for the first time in Korea Successfully replaced 30% of phenol with lignin-
- Successfully replaced 30% of phenol with ligninbased resin

#### Plan for Product Expansion

- Continuously conducting a research on plant-based materials such as CNSL and Rosin in addition to lignin, in order to develop biodegradable, ecofriendly resin for 100% replacement by 2050
- \* Lignin is a future eco-friendly material with a high potential for growth as it is effective in reducing carbon dioxide during a production process compared to petrochemical materials and can replace toxic materials such as phenol

06

Key materials of electronics industry

Development of key materials of electronics industry



#### Achievement in Development

- Developed dry film photoresist (DFR) which is photosensitive material used in the circuit board of highly-dense electronic products such as PCB or semiconductor lead frame
- Developed products suitable for customers' needs with a higher resolution and an excellent adherence in response to a need for ultra-precision circuit for high-volume and high-density
- Developed and commercialized laser direct image (LDI) DFR for PKG substrate which enables excellent resolution using photo profile control creation technology responsive to differentiated LDI light source

#### Plan for Product Expansion

 Continuously expanding businesses in semiconductor PKG substrate market which is an high-end of DFR by developing DFT in response to customers' needs With the plant expansion, we successfully achieved in-house development and commercialization of high value-added hydrocarbon resin and its process. For instance, we have realized the development and production of C9 hydrocarbon resin, C5 hydrocarbon resin and hydrogenated hydrocarbon resin. Not only that, we have showcased our technological competency by developing high value-added products of high reactive resin and pure monomer resin. This has brought our business competency to the next level while greatly contributing to the localization of materials in replacement of imports.

# 3. Development of composite materials and inorganic materials for smart mobility

Composite Material Composite materials refer to materials that have properties that cannot be obtained with a single material by mixing materials with different physical properties. Towpreg is a composite material made by mixing epoxy resin with yarn-shaped carbon fiber that is molded by winding around the mold. Its molding method is eco-friendly and has an excellent production capacity compared to that of conventional molding method. With Towpreg developed by KOLON INDUSTRIES, we can manufacture fuel tank of hydrogen vehicles and drones which are future smart mobility. To this end, we strive to secure technologies in design, manufacturing and evaluation.

Inorganic Material We aim at securing core materials in the smart mobility era by developing a high-strength alloy material. Amorphous ally that is being developed by KOLON INDUSTRIES has disordered atomic arrangement unlike metal alloy which generally has a flake structure. Based on this, it is solid on the surface and liquid on the inside. Amorphous alloy has various excellent characteristics compared to conventional alloy, including high-strength, wear-resistance, excellent magnetic properties and high anti-corrosion. Based on these, it is developed in widely-ranging applications such as development of machinery and parts, electrical parts with high magnetic properties applicable to mobility and high elasticity sports equipment.



### **QUALITY MANAGEMENT**

Kolon Industries

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KOLON INDUSTRIES is dedicated to develop a high-quality product beloved by customers by integrating technology and ecofriendly aspects while increasing a life expectancy of a product with reduced costs and enhanced durability.



Strategic Tasks

#### Spec. clarification and improvement of inspection accuracy

- Advancement of the system for managing raw materials
- Re-establishment of manufacturing-based technology based on P/M
- Solving chronic problems through technical tasks
- Establishment of company-wide facility management processes
- Spec. clarification and improvement of inspection

#### Developing rational methods of operation

- Establishment of a unified company standard system for KOLON INDUSTRIES
- Conducting company-wide integrated internal
- Establishment of Q-Cost operating system - Establishment of VOC operating system

#### Ensuring that organization members have the necessary quality-related competency

- Establishment and operation of quality academy
- Establishment of means for grass-roots improvement initiatives

### **Customer-Oriented Quality Management**

With a goal of realizing "KOLON, Beloved by Customers," as one of the KOLON Group's three core values, KOLON INDSUTRIES constantly strives to implement customer-oriented quality management activities.

#### **Establishment of Quality Management System**

With a goal of realizing "KOLON, Beloved by Customers," as one of the KOLON Group's three core values, KOLON INDSUTRIES promotes customer-oriented quality management activities. We have built and operated quality management system by acquiring and maintaining an international quality management standard, ISO 9001 in all business groups including overseas business sites. For specific business groups, we have also acquired, maintained and systematically operated an international standard, IATF 16949 (automobile industry) and FSSC 22000 (food packaging).

#### Establishing Quality Management Strategy and Roadmap

Under the vision of achieving "KOLON Quality that is beloved by customers," we promote innovation and improvement in all MPQRS\* sectors by establishing 2021 mid- to long-term quality management strategies and roadmap. Our endeavor is to ensure quality reproducibility at a Claim & Complaint (C&C)-free level. As part of this effort, we carry out goal driven innovation (GDI) activities, a way of work unique to KOLON INDUSTRIES. We also implement quality management innovation activities that enable real-time monitoring of all activities from material warehousing to product release, while building a connected factory step

\*MPORS: Marketing/sales (M), Production (P), Quality (Q), Research & Development (R) and Support (S)

### Quality Management Innovation

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KOLON INDUSTRIES has actively carried out company-wide quality management/control activities under the leadership of CEO by operating the Quality Management Committee (Chairman: CEO) since 2019.

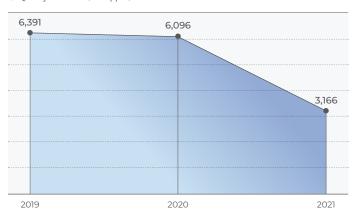
Based on the mid- to long-term quality management strategies of KOLON INDUSTRIES established in 2020, we have been deliberately engaging in quality innovation activities. As performance indicators for these activities, we have developed and introduced quality loss rate for management. Quality Loss Rate is an indicator that is calculated by dividing the amount of loss and damage internally and externally caused by quality issues by sales after introducing a concept of Q-Cost. It is a quantitative indicator illustrating the extent of business performances affected by quality-induced loss. Centering around the mid- to long-term quality management strategies together with the leadership of CEO, we have made achievement of improving quality loss rate by 47% compared to 2021 and reducing KRW 4.7 billion in quality-related loss/damage.

### "Main activities of in-house experts (GDI Level 1)

Roles	Practice	Subject
Task Manager	Conducts technical task as a KOLON Engineer	Those selected as a task manager
In-House Instructor	Acts as an in-house instructor for in-house training courses among GDI Training Program (company-wide)	Those registered as an in-house instructor of the secretariat's regular program
	Acts as an in-house instructor for training courses designated by the GDI-related headquarter	Follow the headquarter's policies
In-House Consultant	Provide face-to-face guidance on promotion tasks for assistant managers in headquarter and report its result to the secretariat	Those selected as in-house consultants in discussion with the secretariat
	Suggest opinions by participating in external advisory meeting held in headquarter, including consulting on key action items	Upon the request of Quality Management Team Leader
	Submit review on data reliability and logical contradiction in technical document upon request	Upon the request for review from the main division

#### **Quality Loss Rate**

Quality Loss Rate(unit: ppm)



#### **Customer Service Innovation**

Goal Driven Innovation (GDI) is a quality innovation program unique to KOLON INDUSTRIES, which consists of a series of procedures and activities that is efficiently and effectively utilized in the development of a cutting-edge technology at the level required by customers based on scientific theory. KOLON INDUSTRIES conducts a series of GDI activities to check the company-wide management system and on-site quality management level each year, and operates a talent cultivation system based on duty and competency to strengthen job competency of technical personnels who are the main actor of GDI activities. In 2021, we have strengthened a technology task process management in order to check whether a technology secured through a GDI technological innovation system has been executed based on scientific and engineering theories. We also carried out quality

attributes evaluation to assess the level of a manufacturing-based technology.

In addition, we have produced 9 graduates of GDI Level 1, 11 graduates of GDI Level 2 and 96 graduates of GDI Level 3 through GDI technical personnel fostering program, which is a talent cultivation system based on job and competency for technical personnels who are the main actor of GDI activities. In particular, GDI Level 1 graduates produced since 2019 currently serve as in-house experts dedicated to acceleration of technology development in headquarter and teams , and a total of 7 GDI Level 1 graduates in 2021 provides substantial support to work while actively working as in-house experts.





# **ENVIRONMENTAL EFFICIENCY**

With the aggravating environmental pollution around the globe, a need for the company's environmental responsibility has become the essential element directly related to the corporate competitiveness. This report includes various efforts of KOLON INDUSTRIES in creating sustainable environmental values by incorporating environmental aspects in policies and business strategies and by engaging in various activities designed to mitigate environmental impact, in effective utilization of environmental resources and in recognition of the impact of the company's business on the environment.









#### **RISK & OPPORTUNITY**

INDUSTRIES is implementing environmental management strategies, such as the use of low-carbon

#### **RELATED MATERIALITY ISSUES**

- **TARGET** Promoting 2040 Net Zero
  - All business sites acquiring an integrated environmental permit by 2024

#### **2021 PERFORMANCE**



Generated a profit by selling GHG emission allowances (KAU21) in 2021

4.5 KRW Billion



Proportion of ISO14001-certified sites

86.7%



Expanding facility investment related to water quality such as improving pump leakage of wastewater treatment facility, improving fluoric wastewater treatment facility and separating rain/waste water lines in the manufacturing process



### **Environmental Management System**

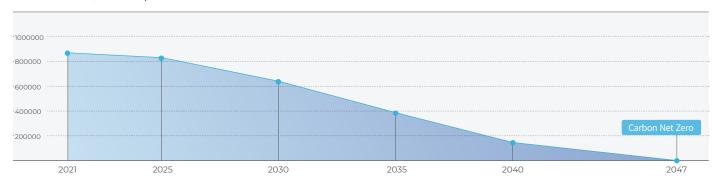
With the objective of achieving carbon neutrality by 2047, we will implement systematic environmental management to ensure strict compliance with environmental regulations and reduce negative environmental impacts.

Carbon Neutral Roadmap (Domestic/Overseas GHG emissions reduction target)

■ Reduction Goal(Unit: tCO<sub>2</sub>eq)

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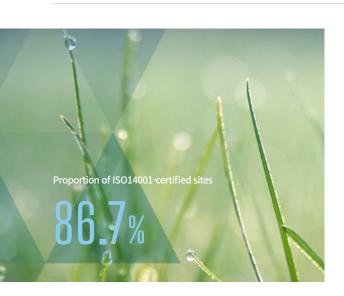
#### **Environmental Management Strategy**

In response to the "Act on the Integrated Control Pollutant-Discharging Facilities," a law that mandates transparent and complete disclosure of information on nine polluting sources, including air and water quality, we have established a company-wide task force to manage them thoroughly by dividing them into 1–2 stages for each business site. Moreover, we have acquired an integrated environmental permit for Daesan, Ulsan, Gimcheon 2 plants by dividing into business sectors. We plan to implement necessary responsive measures such as status survey in order to acquire permits for the remaining plants within the expiry dates (Dec. 2024). Moving forward, KOLON INDUSTRIES strive to strictly observe environmental regulations, invest in eco-friendly facilities and carry out environmental impact mitigation activities in acknowledgment of the fact that our businesses in material, chemical and parts production have a great impact on the environment.

#### **Environmental Policy and Regulations**

KOLON INDUSTRIES, which has established environmental management as its top priority, strives to ensure that not only customers, but also our employees, and even the local community, can enjoy a healthy and clean environment. To realize this, each business site establishes and operates an environmental management policy based on the production process, the surrounding local environment, and product characteristics. Environmental regulations cover environmental management and the overall operation of business sites, and they are periodically revised and reviewed based on the corporate standard management regulations.

Regulation	Purpose & Scope	Operation & Process
Energy and GHG	- In order to promote reasonable energy consumption and establish the operating procedures for the GHG target management system, the scope of application, responsibilities, and work procedures are defined and implemented	For efficient GHG emission reduction, establishing business processes, company-wide GHG target management, and reduction performance management in the regulations and actively implementing them
Water Quality Management	Proper and sustainable preservation of water environment - Complying with the Water Environment Conservation Act (Water Quality and Aquatic Ecosystem Conservation Act) and other relevant laws	Defining roles and responsibilities for the installation/modification and operation of facilities for wastewater discharge and water pollution prevention facilities as well as specifying a procedure, legal and internal management standards in guidelines
Local Contamination	Proper and sustainable preservation of local environments including soil/odor, noise level, and air in each business site  - Complying with the environmental protection law for each type of pollution and other relevant laws	Defining roles and responsibilities, a procedure and legal and internal management standards in regard to the installation/modification and operation of facilities for pollution management per pollution type in guidelines
Waste Management	- Each business site reducing waste and disposing waste without harming the environment - Implementing measures to observe the Wastes Control Act and other relevant laws	Defining roles and responsibilities, and legal and internal management standards for waste discharge and disposal in guidelines
Environmental Impact Assessment	Planning and conducting the environmental impact assessment, defining major environmental impacts and following the detailed management measures     Operating a clean production site which minimizes environmental impacts	-Defining roles and responsibilities, work procedure and evaluation standards, and checklist in guidelines



#### Amount of Environmental Investment



#### **Environmental Safety Committee Organizational Chart**



### Establishment of Environmental Management System

For implementation of environmental management, KOLON INDUSTRIES is operating by applying the ISO 14001 standard, an environmental management system established by the International Organization for Standardization. We have acquired certifications on domestic sites (Gumi, Gyeongsan, Gimcheon 1 & 2, Ulsan, Yeosu, Daesan, Incheon), and have expanded certification acquisition of overseas business sites, thereby achieving 86.7% in terms of a ratio of certified business sites

# Environmental Management Organizations and Achievement

KOLON INDUSTRIES has established the environmental management system to check environmental impact in the course of our business and compliance with the environmental policies and laws at home and abroad. To make this system properly function, we have appointed the general director of environmental management as the Head of Safety and Health Center and have Environmental Management Team fully in charge. The Environmental Safety Committee is operated under the S&H Team. Thanks to the Environmental Management Team's dedicated work, we have realized a profit of nearly KRW 4.5 billion by selling KAU21 with excess emission allowances from holding allowances (allocated+transferred) in regard to GHG emission allowances in 2021.



### **Business Site Environmental Management**

We will eliminate numerous environmental risks through environmental management in recognition of the company's environmental responsibilities. We will reduce the negative impact on the environment through meticulous management, with the aim of eliminating environmental risks that may arise from the operation of our business sites.

#### Business Site Environmental Management System

With a goal of fulfilling legal compliance obligations related to environmental management and operation for proper and sustainable business and to eliminate risks therein, KOLON INDUSTRIES has enacted environmental management regulations for the environmental management and operation of each business site and is promoting environmental management based on them. KOLON INDUSTRIES classifies and manages the environmental impact of its business sites into six environmental factors: air, water quality, soil, noise and vibration, chemicals, and waste. Detailed management standards and procedures in regard to discharge facilities and prevention facilities are established and implemented under the corporate guideline.

### Air Pollution Management

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KOLON INDUSTRIES has installed and operated a Regenerative Thermal Oxidizer (RTO)\* to prevent the emission of greenhouse gas containing volatile organic compounds (VOCs). Using heat generated by burning of VOCs in RTO, we managed to eliminate organic odor and use a great amount of combustion heat as the regenerative material without discharging it to outside. This brings two benefits at once: prevention of air pollution and energy saving. KOLON INDUSTRIES strives to contribute to mitigating global air pollution while responding to regulations on mitigating air pollution-derived particulate matter and dust by replacing facilities every year, if necessary, to ensure that all our business sites comply with the emission allowance standard.

- \*Gumi Plant (2), Gimcheon 1 Plant (2), and Gimcheon 2 Plant (1) are equipped with RTO facility.
- \*2021 Air-Related Investment: Installation of Tele-Monitoring System (TMS), introduction of low-SOx burner for combustion of biogas, and installation of boiler as air pollution prevention facility

#### Water Pollution Management

We operate quick bio reactor (QBR), an advanced water quality management technology related to wastewater. QBR is a biological wastewater treatment facility with one-tenth of volumetric loading compared to activated sludge process. It uses specific bacteria to dispose of high-density heavily contaminated wastewater which is extremely difficult to treat biologically without pretreatment process. These characteristics of QBR have many advantages; smaller area for installation curtailed cost for operation and reduced load on organic matter treatment are improving overall odor reduction and manageability without secondary pollution. Each business site also conducts a water quality contamination test by independent external institutions to figure out the performance and areas of improvement of the facility investment and activities for alleviating water quality pollution. We inspect the pH level, nitrate nitrogen, chlorine ion, lead, and phenol to determine their compliance level, and in the event of non-compliance in discharge, we take necessary measures after identifying its causes.

\* 2021 Water Quality-Related Investment: Improving leakage at the pump of wastewater treatment facility, improving fluoric wastewater treatment facility, and separation of rain/waste water during the manufacturing process

### Water Resources Management

We monitor our water consumption in domestic sites and some overseas sites. We measure and manage our water consumption by classifying it into underground water, industrial water, waterworks, surface water, rain water intake and storage volume. In acknowledgment of a significance of water resources as public resources, we reused and recycled water as an alternative after being chemically treated before discharging as wastewater. 32.3% of the total water consumption was reused and recycled, recording 1,751,711 tons of reused and recycled water in 2021.

#### Soil Pollution Management

We have defined roles and responsibilities of soil pollution and odor management organizations by establishing soil pollution and odor management regulations. We also manage to ensure that the pollution measurement and permissible standards are not exceeded. In the event of non-conformity, we investigate the causes and take necessary countermeasures through a systematic management process. We also conduct a soil pollution level test for each business site as part of soil pollution management process.

\*Key Inspection Items in Soil Pollution Inspection: Benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons (TPH)

#### **Biodiversity Management**

For biodiversity and ecosystem preservation, we manage the local environment of a business site and identify its impact on surrounding environment for mitigation. We aim at minimizing and controlling all kinds of pollution (air pollution, soil pollution and water quality pollution) and waste in the environment surrounding the business site. In addition, we measure and control our consumption of energy and resources including water resources to prevent depletion of resources from a mid- to long-term perspective on ecosystem preservation.

#### Noise and Vibration Management

We established and implemented the regulation and instruction on overall matters concerning noise and vibration for the prevention of damage caused by noise and vibration and their effective management. For hearing protection of employees and residents and mitigation of noise-induced stress, we have established internal standards for each business site to measure and manage noise and vibration level below the legal standards. We are also making efforts to reduce noise through facility and infrastructure investment, if necessary.

### Chemical and Waste Management

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In order to carry out perfect hazardous chemical and waste management in all product production stages, from raw material warehousing to production and product release, KOLON INDUSTRIES has put in place relevant regulations and manuals including Regulation on Chemical Substance Management, Guideline on Raw Materials and Packaged Items Management, Guideline on Hazard Assessment and Regulation on Transportation of Harmful Substances, Regulation of Nonconformity Management, and Regulation on Packaging of Harmful Substances. We also implement safety management and adopt a checklist to ensure that regulations and manuals are fully observed in each stage from handling to storage, transportation and disposal. In particular, the focus of our management lies in safety management, waste reduction and leakage prevention during loading and unloading hazardous substances. To ensure that the standardized regulations and manuals for domestic sites are uniformly applied to overseas business sites, they are translated into English, Chinese, Vietnamese and Spanish. Any revision or change is updated on a regular basis.

#### \*Management System of KOLON INDUSTRIES' REACH, MSDS, and Compliance with Management Guidelines on Harmful Chemical Substances

Description	REACH is a regulation concerning chemical substance management. REACH requires chemical substances manufactured or imported into the EU countries in quantities of $1$ ton or more per year to be registered, assessed, and evaluated. The regulation also applies to mixtures and finished goods containing chemicals
KOLON INDUSTRIES' Management Approach	Starting from the pre-registration of EU REACH in 2008, we have completed the registration of chemical substances used in all export products in 2018. In addition, we provide MSDS by testing 219 types of substances of very high concern (SVHC) and issuing a noncontained certificate for our products. The prior notification was completed in 2020 for Turkey REACH, which came into effect in 2019, and UK REACH advance notification was completed in accordance with Brexit in 2021. Moreover, we check information and collect documents through the purchase portal to determine whether chemical substances from suppliers are registered, purchase from companies that have passed the review, and renew information every two years to update the latest information.
Material Safety Data Sheet (MSDS	
Description	MSDS is a document required when chemical products or products containing chemicals are exported, used, delivered, or stored. The document lists comprehensive information from the name of the chemical product, precautions when handling chemicals, the potential hazards of the material, measures upon explosion or fire, the physical and chemical properties, carcinogenicity to the impact on the environment.
KOLON INDUSTRIES' Management Approach	When preparing MSDS, we make sure it includes the hazards of chemical substances, warning signs based on the classification of its hazards, preventive measures, response, storage and disposal. KOLON INDUSTRIES has put MSDS in place in each business site for the sake of our employees and provided education on target chemical substances, the danger and hazard of chemicals, how to safely handle, how to properly use protection devices, what to do if accidents or emergency situations occur, and how to understand warning signs according to GHS. In addition, to fulfill our responsibilities over product for customers, MSDS is also provided when selling chemical substances. Revisions are also offered to make sure that our customers are safe with the products.
Compliance with Management Gu	uidelines on Harmful Chemical Substances
Description	KOLON INDUSTRIES follows our management guidelines when importing, using, storing, and disposing of all harmful chemical substances. Our guidelines comply with legitimate management criteria, aiming to protect handlers from any form of damages and prevent property loss and environmental pollution.
KOLON INDUSTRIES' Management Approach	KOLON INDUSTRIES establishes MSDS for all chemicals and products containing chemical substances, places them in business sites, attaches labels with a warning sign on them and provides relevant education. In addition, the head of the relevant department of workers handling chemicals is instructing and inspecting the wearing of appropriate personal protective equipment. To this end, we list the necessary protective equipment according to process characteristics and chemicals used, and replace them periodically to ensure sufficient function and performance. Chemical storage and storage facilities are labeled according to the "MSDS Management Guidelines," and harmful risk factors are continuously removed at work sites, and education is provided to prevent occupational diseases and



# **Climate Change Response**

In accordance with the global movement to reduce greenhouse gases, both our domestic and overseas business sites are compiling greenhouse gas inventories. We will continue to combat climate change through the reduction of greenhouse gases.

#### **GHG** and Energy Management

To contribute to the common goal of addressing climate change, we construct a company-wide GHG inventory based on the "Framework Act on Carbon Neutrality and Green Growth for Coping With Climate Crisis" and create value by reducing GHG emissions and energy consumption. KOLON INDUSTRIES also collects relevant GHG and activity data based on the six GHGs defined by the IPCC guidelines, an international standard, and continuously monitors GHG emission facilities. The collected data is verified by an external professional organization every year to ensure reliability. In addition to Scopes 1 and 2, KOLON INDUSTRIES strive to secures data on Scope 3 emission information, such as logistics, transportation, commuting, and business trips, and calculates and manages emissions.

#### **2021 GHG Emissions Data** (Unit: tCO<sub>2</sub>eq)

GHG emissions (Scopes 1 + 2)	GHG emissions (Scopes 2)	GHG emissions (Scopes 1)
642,766	504,401	138,366

<sup>\*</sup> Standard emissions when submitting GHG emission allowances

#### Carbon Neutrality Program and Campaign

Since 2008, KOLON INDUSTRIES has participated in the carbon-neutral program that encourages individuals and businesses to implement measures to reduce GHG emissions in their daily lives. We contribute to carbon neutrality by implementing various company-wide programs and campaigns by each business site. In 2021, we continued to participate in the voluntary energy efficiency target system, establish goals to improve energy efficiency at our business locations, and assess whether or not these goals were met. Diverse efforts have been made to reduce energy waste, such as lowering steam and electricity consumption as a result of process operation adjustment and installing LED lighting.

#### **GHG** Reduction Activities

KOLON INDUSTRIES promoted environmental education for its employees in an effort to increase their awareness of environmental issues including greenhouse

gases. Energy saving activities are largely divided into process efficiency improvement activities (waste heat recovery, refrigeration efficiency improvement, off gas recovery fuel input) and operation method optimization activities (optimizing operation of pneumatic chamber facilities, changing fuel feed conditions, and steam reductions by optimizing dimerization operation).

Through these activities, approximately 4,400 tons of greenhouse gas emissions were reduced annually in 2021, with additional economic effects anticipated from cost reductions and additional carbon credits. In line with the global trend of reducing greenhouse gas emissions, KOLON INDUSTRIES is also working to manage greenhouse gas emissions at its overseas business sites. In 2019, we compiled a greenhouse gas inventory for our overseas business sites, and in 2021, we assessed the solar power generation potential of all domestic business sites, laying the groundwork for the expansion of new and renewable energy. KOLON INDUSTRIES will contribute to global carbon neutrality through the effective management and reduction of greenhouse gas emissions at all domestic and overseas business sites.

#### **GHG** Reduction Leadership

Clients' demand for carbon neutrality is increasing in line with the growing interest in carbon neutrality throughout the world. In accordance with this international trend, KOLON INDUSTRIES is also hosting briefings to provide information on carbon neutrality to departments such as sales, purchasing, and accounting in addition to those responsible for responding to climate change.

KOLON INDUSTRIES responded proactively from the first year of implementing the emission trading system in 2015. This is demonstrated by the reduction of approximately 230,000 tons during the first period of the emission trading system (2015–2017) and the acquisition of approximately KRW 4.7 billion through the sale of carbon credits. As such, we strive to reduce GHG emissions that exceed the government's required reduction level. In addition, in order to surpass the limitations of greenhouse gas and energy reduction, we are engaging in a number of activities, such as purchasing carbon credits and analyzing new energy businesses. Since 2016, we have participated in the Carbon Disclosure Project (CDP) in order

#### Major GHG Reduction Performance

#### **Process Efficiency Improvement**

- Augmentation of process insulation
- Hot water by-pass supply
- Reducing valve pressure loss by means of magna coupling
- · Minimizing leak points by utilizing leak detectors, etc.

#### **Operation Method Optimization**

- Preventing excessive power consumption by compressor load operation
- Applying motor inverters
- Optimizing operation of pneumatic chamber facilities
- Changing the fuel feeding condition
- Reducing the amount of steam by optimizing dimerization operation

#### Expansion of Renewable Energy Use

- 506,079 kWh of total new and renewable energy produced in 2021 via solar power generation
- Planned to conduct a solar power generation potential evaluation project for all domestic business sites in accordance with the 2021 Carbon Neutrality Roadmap

to develop climate change response strategies based on more quantifiable data and disclose these to domestic and international stakeholders. In addition, we disclose our climate change performance in a transparent manner to stakeholders by disclosing it to the Greenhouse Gas Information Center of the Ministry of Environment, the Environmental Information Disclosure System, and the Electronic Disclosure System of the Financial Supervisory Service.



# **SAFETY AND HEALTHY SITES**

Creating a safe workplace and preventing disasters and accidents that may occur in the company's operations and production activities are crucial to achieving corporate sustainability. This report describes KOLON INDUSTRIES' safety management organization, system, structure, and method. By making every effort to ensure safety, KOLON INDUSTRIES will lead the way in establishing sustainable corporate values through safety.



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#### **RISK & OPPORTUNITY**

corporate value and becomes a prerequisite for a trustworthy business. However, countermeasures exclusive budget under the CEO's instructions, established a dedicated organization to systematize work,

#### **RELATED MATERIALITY ISSUES**

- **TARGET** Zero serious accidents
  - 50% reduction in safety accidents
  - Identifying and reducing 20% of hazardous risk factors



Prepared a safety and health reserve in accordance with the CEO's instructions in 2022



Established KOLON INDUSTRIES' new Safety and Health Center, an organization dedicated to safety and health, on January 1, 2022 to establish company-wide safety and health policies and goals



Identifying hazardous risk factors

1,868 cases

### Safety and Health Management System

We will recognize that it is the company's responsibility to protect the rights of its employees in order to prevent accidents through safety and health management. We will advance and systematize safety and health management in order to safeguard our employees' health.

#### Safety and Health Management Policy

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The dignity of human life cannot be exchanged for anything or measured in monetary terms. We are constructing a system and promoting a safety culture to ensure that safety is the top priority in all business operations, in accordance with the principle "No Compromise on Safety." In addition, we acknowledge that safety investment is a high-priority value investment that maintains a sustainable company through accident prevention in the mid- to long-term. The safety and health reserve budget is additionally organized, and harmful risk factors identified through risk assessment and on-site inspection are institutionalized so that they can be immediately invested in/improved to ensure the safety of workers.

Safety and Health Management Goal Zero serious accidents, 50% reduction in safety accidents, and identifying and reducing 20% of hazardous risk factors

Business Site Safety Diagnostic Activities Although it was reduced during the COVID-19 pandemic, starting in 2021, preemptive safety diagnosis has been carried out as much as is practicable to achieve zero risk within the limit permitted by the COVID-19 situation. In addition, the 3S activities to promote a safety culture are systematized and applied company-wide to strengthen the activities. KOLON INDUSTRIES supports the establishment of a safety and health system and on-site inspection so that it can be implemented in the field.

Establishment of an Immediate Safety and Health Improvement System and Implementation of TF for the Enactment and Revision of Safety and Health-**Related Regulations** In order to transform related regulations, including safety and health management regulations, into field-applicable internal regulations, the Safety Diagnosis Team conducted regular compliance inspections and extensive revisions. In addition, we are establishing a system for immediate improvement by reporting to the CEO on inspection results and issues that require a countermeasure. As directed by the CEO, a company-wide safety and health reserve of approximately KRW 2.2 billion has been established since 2022 in order to secure a budget for immediate investment in hazardous risk factors requiring immediate improvement at business sites. As such, we have established a financial foundation so that an immediate investment can be made when hazardous risk factors necessitating immediate improvement are identified in the workplace.

#### Safety and Health Management Policy

#### Integrated Management System, Sustainable Management Policy

- · Putting safety and health first and minimizing life loss and damages through promoting an accident-free movement securing process
- Securing process safety by achieving and maintaining PSM grade "P" on the foundation of Process Safety Management (PSM)
- · Realizing customer satisfaction with the highest competitiveness through consistently improving quality and building product reliability
- Disclosing relevant information when requested by stakeholders to ensure transparency

#### Amount of Safety Investment



#### Reinforcing Safety and Health Management Organization

A new Safety and Health Center, a health and safety organization of KOLON INDUSTRIES, was established on January 1, 2022 in order to establish company-wide safety and health policies and goals. An S&H Team and a Safety Diagnosis Team were established and operated under the center. After its establishment, we have bolstered our expertise by continuously hiring external experts and selecting and transferring internally competent individuals.

#### Safety and Health Management Organization

#### Safety and Health Center

- 1) Establishing company-wide safety and health management policy and goals
  - Identifying company-wide safety and health issues in order to plan, operate, and manage improvement plans, and conducting evaluation and standardization
- Analyzing company-wide safety and health data statistics (data on the discovery of hazardous risk factors, data on the occurrence of industrial accidents, etc.) and planning improvement actions
- 2 Monitoring and analyzing relevant laws and regulations and planning company-wide preemptive measures
- 3 Developing and operating content to improve safety culture
- 4 Enacting and revising company-wide safety and health regulations, reviewing business site safety and health principles, and promoting the acquisition of the safety and health management system (ISO45001) certificate
- (5) Establishing and implementing a disseminating process in the event of an occupational disaster

- ① Fulfilling CEO's obligation of securing safety and health (Serious Accidents Punishment Act; semiannually for each business site)
- 2 Irregular PSM inspection via workplace safety audit, project safety diagnosis (3 times: before design, 80% of construction, and before operation)
- 3 Thematic safety evaluation (diagnosis by visiting business sites by selecting a theme on a regular basis)
- 4 Emergency response, accident investigation (if necessary), and





### Reinforcing Safety and Health Management

By instituting a safety and health management system in the workplace, we ensure not only the safety and health of our employees, but also that of our partners. We have also established an emergency response system for each workplace in order to actively respond to dangerous incidents and accidents.

#### **Business Site Safety Management**

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To take responsibility for the safety and health of all our employees, all our business sites and research institutes appoint a person in charge of safety and health management (general manager), and the EHS Team provides professional advisors and guidance on safety and health. Supervisors are also assigned to production-related organizational units to complete specialized training, and they are developed as experts capable of ensuring the safety of their team members. The workplace conducts risk assessments on a regular basis and on an as-needed basis in accordance with company-wide risk assessment regulations. All risk assessment-identified risk factors are mitigated through the implementation of an action plan, and the CEO provides direct support for immediate improvement by securing a company-wide budget of approximately KRW 2.2 billion

Establishment of Occupational Health and Safety Management System (ISO45001) Six domestic business locations (Gumi, Gimcheon 2, Ulsan, Yeosu, Daesan, and Incheon) and one overseas business location (KNC) have obtained certification for their health and safety management systems. This represents 46.7% of all business sites, and our goal is to acquire 100% of domestic business sites by 2023.

Reinforcing Safety and Health Management of Suppliers To improve the safety and health management of suppliers, the company-wide regulations governing the selection of suppliers have been revised. In the selection process, evaluation standards and procedures for suppliers' ability and technology to prevent industrial accidents have been developed and systematized so that suppliers that do not meet the required level can be disqualified. In addition, we are working to systematize the details of each safety and health management item to be reflected in the contract renewal by carefully examining the specific amount of money and evaluating the actual execution. The 3S\* activities planned and executed by the Safety and Health Center are also actively promoted at the workplace so that they can become a part of KOLON INDUSTRIES' culture. In addition, we actively engage in internal

inspections, such as semiannual inspection of the Serious Accidents Punishment Act and workplace safety audits, and we will make every effort to implement 100% of the resulting improvements.

\*3S=Safety Day, Safety Talk, Safety Golden Rule)

#### **Emergency Response System**

An emergency action plan and emergency response training are part of the emergency response system. The emergency action plan is established with the highest goal of protecting workers' lives, including all potential emergencies, or clarifying the division of work and duties of the emergency control organization. It includes not only an internal emergency plan but also an external emergency plan for facilities. Accordingly, KOLON INDUSTRIES prepares for accidents by installing an emergency response system at each of its business sites. To increase accessibility, the emergency action plan was prepared so that it can be easily understood and placed in a location where all employees can easily access it. The emergency action plan is regularly reviewed, revised, and supplemented. The emergency response plan consists of an emergency contact system, an emergency response organization, emergency scenarios, response

#### Risk Assessment System Diagram (1) (2) (3) **Responsive Actions Rescue Actions** Prevention of Secondary Damage Work suspension, Worker Contact system to 119, Control of site access, sharing of impact evacuation, Elimination of etc., basic first-aid scope with other business sites, roothazardous factors cause analysis, preparation of preventative measures measures, etc. ₩ $\overline{\mathbf{v}}$ (4) Emergency Response Training



- · Business site risk assessment: every year
- Process risk assessment: at least every 4 years (according to internal regulations)
- Work risk assessment; every year
- Investigation of work posing the risk of musculoskeletal harm: every 3 years

#### 수시평가

- Change management (process)
- Safe work permit (work)
- Revision of work standards (work)
- Before/after the start of new PJT construction
- Building installation, relocation, change, and dismantling
- Ad hoc musculoskeletal evaluation
- Recognition of occupational diseases
   Introduction of new work and
- equipment
- Change of work environment

References: Risk Assessment System

### Occupational Safety and Health (OSH) Committee (Unit: Case)

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2019	2020	2021
1,368	1,765	1,868

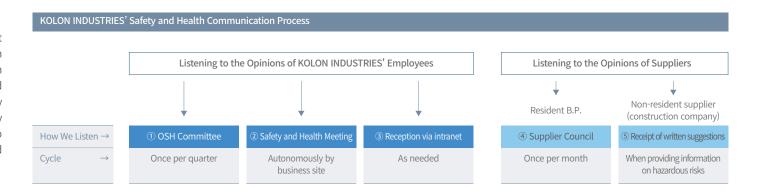
measures, relief measures, and further damage prevention measures.

High-risk workplaces subject to PSM for fire and explosion establish an accident scenario in preparation for the worst-case accident scenario, and establish an evacuation plan by calculating the impact range in the event of an accident through simulation of accident damage. Emergency response training provides education and training so that the emergency plan can be implemented in a systematic and orderly manner in the event of an emergency. In addition, the workplace environment safety team establishes an emergency drill plan and requires all department members to participate at least once a year; confined space emergency rescue drills are conducted every six months.

#### Chemicals Safety Safety Management

To preserve a clean and healthy global environment, all chemical substances handled are thoroughly managed using an IT-based database system. When new chemicals are used, the use of hazardous chemicals is minimized as much as possible by the EHS team at the work site and the Environmental Management Team at the headquarters that double check in accordance with the "Chemical Substance Preliminary Review Manual." Even when the use of hazardous chemicals is unavoidable, it is only used to the extent that the intended purpose is served. In addition, even when a supplier's ingredients or composition change, we conduct a preliminary review in order to completely control the risks associated with the use of chemical substances. KOLON INDUSTRIES' chemical substance database is a very useful system for judging the stability and suitability of chemical substances, by adopting SAP's "SERC DB" which contains regulatory information on 250,000 types of chemical substances in 57 countries around the world. In 2021, a total of 1,868 materials were reviewed, and a total of 8,328 materials have been reviewed since 2016, when the system was introduced. We will continue to perfectly manage all chemical substances to supply and produce products that can be used safely by customers as well as employees.

\*No. of Chemical Substances Reviewed



#### **Provision of Safety Information**

We establish procedures for providing accurate information about products and chemicals pertinent to the safety of customers. We developed an IT system for creating, updating, reviewing, confirming, and issuing Material Safety Data Sheets (MSDS) to customers, as well as a database, in order to sell products. In addition, we have a department responsible for continuously monitoring compliance with legal requirements and omissions.

#### **Communication Management Process**

To hear workers' opinions, the Occupational Safety and Health Committee is convened quarterly to receive opinions and take action through workers' representatives, and opinions are also gathered through voluntary safety and health meetings at each workplace. In addition, an online submission system was established so that all employees can express their safety and health-related opinions. For suppliers, resident BPs can voice their opinions through the monthly supplier council, and non-resident suppliers such as outsourced construction companies can submit their written recommendations via mail. All cases received are reviewed so that they can be addressed, and the Safety and Health Center reports the results to the CEO on a regular basis.

### Occupational Safety and Health (OSH) Committee

#### OSH Committee representative workers

2019	2020	2021
52	50	49

#### OSH Committee target employee

2021	2020	2019
2,768	2,732	2,790

#### % of employees covered by the OSH committee

2019	2020	2021
100	100	100



To raise awareness of health and safety in the workplace and to prevent accidents, we analyze all safety incidents and implement countermeasures, as well as conduct regular site inspections and provide health and safety training to employees and employees of partner companies.

#### Safety and Health Training

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We offer a range of education programs to raise employees' awareness of safety and health and develop the necessary safety/health knowledge and skills for work. The Chemical Substances Control Act, the Occupational Safety and Health Act, hazardous work environment management, and health promotion are covered in a monthly education program. In addition, senior safety and health professionals, such as safety and health managers, supervisors, safety managers, and hazardous materials safety managers, are required to receive education in order to perform professional safety and health duties. Furthermore, each department uses the results of the risk assessment to train those in charge of related work, and opens and implements safety areas in customized training programs that take into account the characteristics of the work, as well as inhouse training programs for junior employees. In addition, safety and health education is provided to all workers of outsourced construction companies who visit the premise frequently before work begins. The work safety can be ensured as workers are aware of the risks in the factory as well as the risks associated with each work procedure.

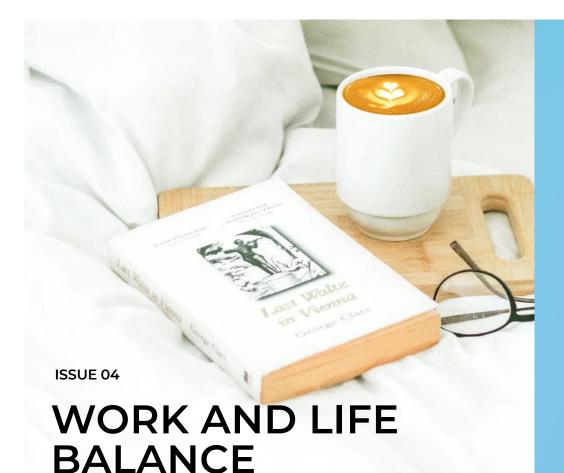
### Securing Safety and Health of Supplier

By forming a supplier council and engaging in disaster prevention activities with our resident BPs, we ensure the safety and health of our suppliers. Through the supplier council, we receive and act on suppliers' safety and health-related opinions, and conduct monthly joint inspections and support improvements. In addition, resident BPs recognize that risk factors that exist within KOLON INDUSTRIES' business sites can affect each other, and provide risk information such as accident scenarios, the extent of damage impact, and designated evacuation sites.

#### Analysis of Safety Accidents and Prevention of Reoccurrence

For all safety incidents, including a near miss, the workplace prepares an investigation report that includes a fundamental analysis and preventative measures. In 2022, company-wide accident investigation reports will be reviewed by in-house safety experts to assess the validity of measures to prevent recurrence of the root cause and, if necessary, implement a special program to take additional improvement measures. In addition, EHS Teams at each work site collect and share the details of safety accidents with the company-wide environmental safety council each month, and if necessary, preventive measures are implemented across the organization. When major accidents or violations of laws and regulations are reported by other companies in similar industries, we conduct company-wide emergency inspections as needed and review the current status and results to take preventative measures against similar accidents. In addition, through statistical analysis of safety accident types over the past 10 years by industry, customized accident prevention activities are conducted, and the Safety and Health Center inspects and evaluates workplaces with excellent customized accident prevention activities.





Demand for work-life balance is an essential and crucial factor for the long-term growth of not only businesses but also the country. Improving corporate competitiveness and the quality of life for workers through work-life balance, and creating sustainable value by coping with a decrease in production manpower due to the low birth rate and the aging of the population at the national level are the demands of the times. This report discusses KOLON INDUSTRIES' corporate sustainability initiatives that promote work-life balance, human rights protection, and the pursuit of happiness at work.



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#### **RISK & OPPORTUNITY**

human rights-related policies and evaluations, and seeks to increase workplace satisfaction by

#### **RELATED MATERIALITY ISSUES**

- **TARGET** Maintaining human rights management training for 100% of executives and
  - Maintaining 100% return rate from parental leave

#### 2021 PERFORMANCE



Child labor

Zero



Executives and employees using flexible working hours (flexible/selective working hours)

1,358 Persons



Health check-ups ratio

92.4%

# **Human Rights Management**

By adhering to our corporate social responsibilities, we promote human rights management that respects the fundamental rights of all stakeholders in order to foster positive relationships with stakeholders who have direct or indirect influence over the company and to create social values.

#### Human Rights Management Policy

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Recognizing the company's human rights management responsibilities, we adopted and disclosed the Human Rights Management Declaration under the CEO's name in 2018 and established a human rights policy with nine operating guidelines. We respect and protect the human rights of all stakeholders affected by our business activities, including employees, customers, suppliers, and local communities, and set the highest standards for respect and protection of human rights in all regions where we operate. In addition, we will do our utmost to prevent human rights violations that may occur along the value chain in advance and minimize their negative impact.

### **Human Rights Impact Assessment**

In promoting global business, KOLON INDUSTRIES recognizes that cultural, customary, religious, racial, and institutional differences in each region may result in unintentional human rights violations during business operations. To assess these human rights-related risks, we introduced an impact assessment to identify, prevent, and mitigate business-related human rights risks. Human rights impact assessment comprises the diagnosis of 10 human rights areas in accordance with the "Guide to Human Rights Impact Assessment and Management" and the institutional human rights impact assessment of the National Human Rights Commission of Korea. External organizations administer the entire management system, including company policies and systems as well as domestic business locations and the corporate headquarters. In the second half of 2022, the human rights impact assessment will be conducted by updating the human rights impact assessment checklist and questionnaires.

#### Mitigating and Monitoring Human Rights Risks

According to the result of the 2019 human rights impact assessment, the employment rules and personnel regulations now include "prohibition of workplace harassment, respect for diversity, and prohibition of child labor/forced labor." Regarding human rights risks, KOLON INDUSTRIES employs no workers under the age of 15, including at overseas business locations. As a precautionary

#### **KOLON INDUSTRIES' Human Rights Policy**

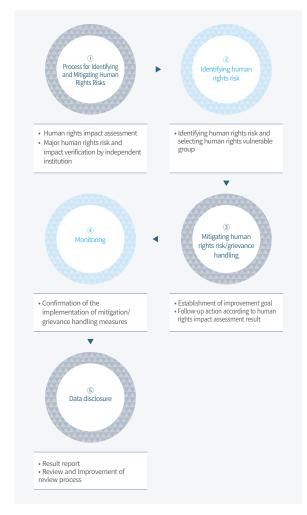
#### 1. Principle

KOLON INDUSTRIES respects and protects basic human rights as stipulated in various international human rights regulations, including the UN Universal Declaration of Human Rights, the UN Global Compact, the UN Guidelines for Implementation of Business and Human Rights, the OECD Guidelines for Multinational Enterprises, the UN Convention on the Rights of the Child, the labor principles recommended by the International Labor Organization and ratified by the state, the laws of the countries in which it operates and other international human rights norms (hearafter guidelines).

#### 2. Operational Guidelines

- 1 Humane treatment We shall respect our employees as human beings and strive to create a safe working environment without any inhumane treatment or threats such as mental or physical coercion or verbal abuse.
- 2 Prohibition of forced labor We shall not unreasonably restrict mental or physical freedom or force employees to work against their will. We shall not require employees to hand over their government-issued identity ID cards, passports or work permits as a condition of employment.
- 3 Prohibition of child labor We shall comply with the minimum working age prescribed under the national and regional laws, and prohibit any form of child labor below the age of 15. We shall hire minors under the age of 18 in compliance with labor relations and laws and shall ensure that they are not engaged in any hazardous or harmful work in terms of safety and health.
- 4 No discrimination We shall provide equal opportunities to all employees and applicants in terms of personnel management such as employment, promotion, compensation, and disciplinary action, and shall not discriminate under any grounds such as race, gender, age, region of origin, educational background, religion, marital status, political opinion, social status, or disability.
- **⑤** Working hours We shall comply with regulations associated with regular, overtime work, and holidays/off days set in each national and regional law.
- **6** Wages and working conditions We shall comply with the matters on the wage and working conditions, such as the minimum wage and overtime pay set by national and regional laws.
- 7 Freedom of association We shall ensure the freedom of association and the right to collective bargaining guaranteed under national and regional laws, and shall not treat employees unfavorably for forming a union, joining as a member, and engaging in any activities.
- ® Protection of human rights of local residents We shall respect and protect the local residents' right to life, freedom of movement, personal safety, and right to own properties in the areas where our business is located.
- Protection of environmental rights We shall adhere to the principle of a preventive approach for preventing local residents from suffering any difficulties, including harmful substances and noise, in the area where our business is located, and shall provide the means for the affected individuals or groups to receive relief.

#### Process for Identifying and Mitigating Human Rights Risks



# measure, we intend to strengthen human rights education within the company, including matters on child and forced labor and human rights protection measures.

#### Child Labor Status(Unit: Persons)

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Category	2019	2020	2021
No. of child workers	0	0	0

#### Reinforcing Human Rights Education

To guarantee the human rights of employees and prevent discrimination, we provide statutory mandatory education such as "sexual harassment prevention education" and "awareness raising on persons with disabilities" once a year, as well as a variety of human rights education for all employees. In addition, education on gender equality, prohibition of discrimination, and prevention of workplace harassment is provided to increase education's satisfaction and efficacy. In 2021, despite the intensification of the COVID-19 situation, 93.6%\* of domestic employees completed human rights training to prevent social issues such as sexual harassment and workplace harassment, forced labor, child labor, and violations of rights in the workplace. We intend to continue providing our employees with human rights education and management in the future.

\*Ratio of employees who completed human rights training to those who were required to complete such training

### **Employee Grievance Handling**

We operate an integrated online grievance management system in order to respond promptly to various human rights violations, including sexual harassment and workplace harassment. An informant can report anonymously through the online reporting channel. According to the "Prohibition of Searching for Informant" regulation, the identity of the informant and all information related to the report are protected, and any attempt to discover this information will be punished severely. The informant and the report's content is strictly confidential, and our reporting system is safely protected with thorough security system. In addition, the informant and the report's contents are strictly managed by a small group of individuals who have pledged to maintain confidentiality. In accordance with the labor-management council operation regulations, we maintain a grievance committee composed of one representative from both labor and management. Grievance officers notify workers of measures taken within 10 days from hearing a grievance.

\*Grievane management system: employees can report various human rights violations including sexual harassment and workplace harassment

### **Respect for Human Diversity**

We respect human diversity by prohibiting discrimination on the basis of gender, age, race, disability, religion, political orientation, and place of origin, and by ensuring equal opportunities throughout the entire process, from recruitment and evaluation to compensation and education. In order to achieve a workfamily balance, various family-friendly welfare systems, such as reduced working hours during pregnancy and childrearing for female employees, are

implemented. Under equal conditions, KOLON INDUSTRIES hires women on a regular basis, and there is no difference in pay between men and women. Dedicated parking spaces, restrooms, and Braille guides have been installed in the building for employees with disabilities, and in order to provide quality employment to persons with disabilities, we started operating a bowling team comprised of persons with disabilities in partnership with our affiliate KOLON SPOREX in December 2021.

#### Status of Equal Compensation for Male and Female in 2021(Unit: %)

Category		2019	2020	2021
Equal compensation	Managerial level	93.4	86.3	86.3
by gender	Non-managerial level	96.3	98.4	94.7

<sup>\*</sup>Employees with over 6 years of experience (excluding executives)

### **Innovation and Communication Culture**

In order for our employees to grow and feel a sense of belonging, to pursue corporate growth and innovation, and to coexist with stakeholders such as customers and partners, we have fostered a culture of open communication and innovation.

#### Trusted Labor-Management Relations

Kolon Industries

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KOLON INDUSTRIES guarantees free union membership of its employees in accordance with the Labor Relations Act and collective bargaining agreements. As of 2021, the ratio of employees participating in union membership is 66.8%, and the ratio of employees eligible for collective agreements is 70.1%. Additionally, the name of the existing labor-management council was changed to the "Win-Win Council" with the intention of fostering a cooperative relationship between labor and management and facilitating their communication. The Win-Win Council consists of an equal number of employers and workers, and discusses issues related to workers' safety and welfare every quarter In addition, we strive to maintain a reliable labor-management relationship by communicating through various channels such as wage and collective bargaining negotiations with the labor union, the Win-Win Council, as well as the Occupational Safety and Health Committee and labor-management joint workshop.

The collective agreement prohibits disadvantageous treatment of union members for union activities and specifies "working conditions," "health and safety management of employees," "education," and "maternity protection." Contents include working hours, overtime/night/holiday work, holidays, various allowances, vacation for congratulations and condolences, promotion, wage payment in case of emergency, operation of the Occupational Safety and Health Committee, safety education, provision of safety gears, health checkups, outplacement program, maternity and perinatal leaves, infertility treatment, and spouse's maternity leaves. The contents not specified by the collective bargaining agreement are operated in accordance with the employment regulations. The employment rules include working conditions, education, safety, maternity protection, discrimination and harassment prevention. Through "win-win cooperation," "co-prosperity," and "cooperation," we are continuing to eliminate all disputes, which is powered by the efforts of both labor and company to build a reliable cooperative relationship.

\*Labor union membership rate: Union members among technical workers / total number of technical workers employed in all workplaces

### **Reverse Mentoring**

Reverse Mentoring is KOLON's unique innovation program, which proposes

ideas related to business and organization where executives and millennials come together to interact, understand the mindset and values of generations, and share the latest trends, new knowledge, skills, and opinions of millennials. In 2021, all senior executives met with younger millennials and had a meaningful time to build a vibrant organizational culture. KOLON will continue to promote communication within the organization through a variety of programs and will take the initiative to improve the culture of the organization.

# Compliance Strategies and Performance of BP (Management of Illegal Subcontracts, Etc.)

To achieve win-win growth not only with labor and management but also with internal stakeholders, we refer to our suppliers as business partners (BP) and seek to grow together. At BP's request, we provide internal/external consulting support to strengthen compliance while maintaining a contractual relationship with the company. The welfare facilities of KOLON INDUSTRIES are also accessible to BPs, and healthy relationships with stakeholders are being cultivated through a win-win cooperation task force in which labor, management, and business partners participate, as well as through regular meetings of BP representatives and joint safety inspections with subcontractors. In 2021, in the midst of the spread of COVID-19, a number of events were held, including joint operation of virus spread response programs, win-win cooperation programs with subcontractors, and joint sporting events. In addition, the members of the original subcontractors voluntarily raise/create funds and use them for the subcontractors' win-win activities.

#### Employee Representative Organization Membership Status

#### Member of employees(Unit: Persons)

		2019	2020	2021
Member of employees	Persons	2,385	2,345	2,371
Employees eligible for membership	Persons	2,385	2,345	2,371
Application rate	%	100	100	100

# Activities and Examples of Events with Labor-Management Partners

For effective communication with members, we utilize a variety of channels, including Open-it bulletin boards, Win-Win Council, Grievance Committee, monthly town hall meetings, and regular business performance presentations. A total of 127 opinions were expressed on the Open-it bulletin board, an anonymous suggestion window for improvement opinions, and 100% of feedback was provided on the opinions. Understanding the differences between the MZ generation and the OB generation based on their different growth backgrounds, we conduct a survey to activate intergenerational empathy and link-up campaign that reflects these differences.

#### Link-up education



Link-up Education I By dividing into the leader course/ common course/team workshops, we are promoting short-clip video viewing and offline training so that employees can easily access the content in order to take a prospective approach to generational empathy. The campaign has been ongoing since last year, and it is scheduled to begin in June of 2022. In addition, beginning in 2022, we intend to conduct company-wide education on diversity acceptance and mutual respect in order to connect different generations within the organization and foster a synergistic organizational culture.

### Pursue of Work-Life Balance

Maintaining a healthy work-life balance is not only directly related to personal health, but also to corporate productivity; therefore, we pursue a healthy work-life balance by implementing various policies to support the physical and mental health of our employees and the employees of our partners.

#### **Healthcare Support**

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Considering the health of our employees and their families as our top priority, we conduct annual health checkups for all employees, including BP employees, in collaboration with hospitals near each business location. In addition to monitoring the health of the employees' families, the screening target has been expanded to include all executives' and employees' spouses as of 2020. Over the age of 35, comprehensive medical examinations are performed, and a health examination program tailored to the life cycle of employees is operated. In addition to general health checkups, workers who are at risk of being exposed to hazardous factors on production and research sites undergo periodic special health checkups to maintain their health.

At major business locations, doctors/nurses are employed to manage the health of employees, and regular flu vaccinations are provided free of charge, with an emphasis on the prevention of infectious diseases. From the beginning of 2020 to the present, in the global pandemic environment, the COVID-19 quarantine policy was implemented to protect the health of employees and their families, mandating that all employees wear masks and prevent face-to-face contact in facilities that pose a risk of transmission. By recommending contactless work practices, efforts were made to reduce in-house infections. Paid leave has been granted to employees who have been diagnosed with COVID-19 or who are at risk of being diagnosed, so that they may take rest and receive treatment.

Since September 2020, we have operated a psychological counseling program that supports not only the physical health but also the mental health management of our employees. We are operating both in-person and remote consultations through around 200 professional counseling centers nationwide.

#### **Childrearing Support**

As a family-friendly system, we offer pregnant women reduced working hours during their pregnancy for an extra four weeks in addition to statutory requirement. In addition, by designating pregnant women-only parking spaces, we are offering consideration and protection for the pregnant women. In addition, we operate the Magok KOLON Daycare Center, an in-house daycare

center in Magok, as well as a reduction in working hours during the childcare period and a leave system for family care to prevent childcare resulting in career discontinuity. In addition, we operate a number of programs, including support for infertility leave and treatment costs, congratulatory payment when a child enters a school, and use of spouse's maternity leave in two installments. With such endeavors, we achieved a 92.9% return rate after parental leave for both males and females for 2021.

#### **Expansion of Flexible Working Hours**

To help employees achieve work-life balance, we introduced a selective working hour system that allows employees to freely set their commuting time, centered on office workers, in 2020, and we also introduced telecommuting in 2020. During the COVID-19 pandemic, 30% to 50% of each department was designated to work from home, and even after returning to normal operations, employees who are pregnant or in need of family care are still permitted to work from home. Considering pregnancy, childcare, and family care, shortened working hours are permitted for relevant employees.

#### Retirement and Outplacement Support

Using a retirement and outplacement support program, KOLON INDUSTRIES assists prospective retirees in preparing for a second life after retirement. In 2020, we supported retirees through retirement and outplacement programs such as life planning, career planning, reemployment, and business startup. In 2021, we plan to conduct the course in November after conducting a preliminary demand survey on trainees. For this, we have planned a variety of programs, including updating educational content and inviting former professionals to impart their knowledge.

### **Employee Satisfaction Survey**

We regularly conduct employee satisfaction surveys for all employees each year and strive to improve employee satisfaction by identifying employee needs and implementing internal improvements through an annual analysis of employee satisfaction trends.

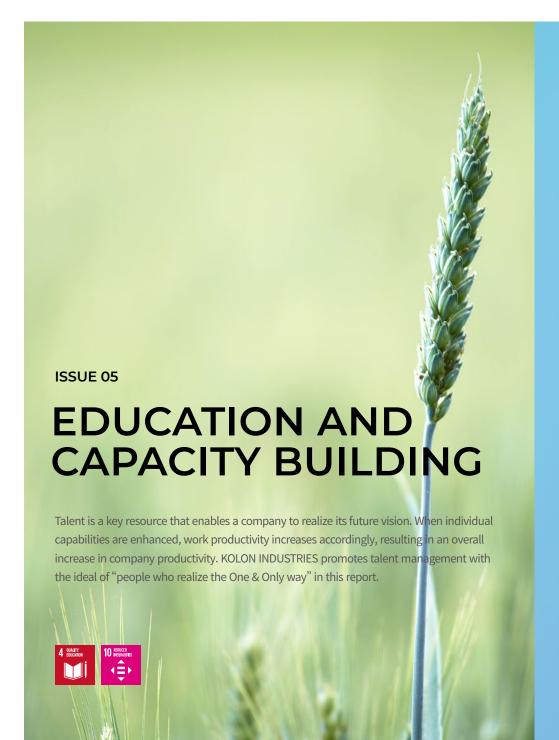
Through efforts to prepare and support the operation of various child-rearing support systems, both men and women returned to work at a rate of 100% in 2021.





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#### RISK & OPPORTUNITY

Human resource is the key to overcoming the intensifying global competition. KOLON INDUSTRIES cultivates talent through organizational and individual training in order to recruit talent without discrimination and to bolster internal competencies. In addition, performance is reflected in the evaluation system in order to motivate employees.

#### **RELATED MATERIALITY ISSUES**

 Establishing employment stability and providing fair performance evaluation and compensation

#### **2021 PERFORMANCE**



Recruitment of local talents among new employee

54.3%



Achieved an employee training investment

KRW billion



Employees Received Regular Evaluation

85.4%

### **Human Resources Development System**

To become the most beloved company by customers, we promote rational and efficient talent management that places a premium on human resources based on KOLON's core value of "One & Only Way."

#### Ideal Employee of KOLON INDUSTRIES

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"People who realize the One & Only way," the ideal employee of KOLON INDUSTRIES, contains the core values that each KOLON employee should consider the most important. 3 Ways are what KOLON should ultimately achieve as a decision-making standard for KOLON employees, and 9 Practices contain detailed instructions for KOLON employees to realize the One & Only way in all aspects of their daily lives. KOLON INDUSTRIES will improve the company's sustainable value through talent management.

#### Fair Recruitment

KOLON INDUSTRIES is recruiting talented people who are suitable for their talents through a fair and transparent hiring process. We forbid any form of discrimination such as race, gender, and religion. We have the regulation concerning the anticorruption management system in the HR regulations, minimizing corruption risks in recruitment. On top of that, to prevent unfair hiring and human rights violations that may occur in the course of interview process, we have intensified the education toward interviewers, and stipulated a manual for objective and fair evaluation. When hiring, we conduct blind interviews, excluding information irrelevant to the job, such as social perceptions and stereotypes. Through this, we recruit talented individuals that meet KOLON's ideal view of employees. We implemented a preferential employment policy for individuals of national merit and veterans. In 2021, 145 new hires in the manufacturing sector were selected as local talents. In addition, we practice creating employment opportunities for the socially disadvantaged in a variety of ways, such as by hiring persons with disabilities.

Moreover, in the midst of the COVID-19 crisis, KOLON INDUSTRIES has incorporated new recruitment methods. By switching from a face-to-face interview to a non-face-to-face interview and administering a personality test online, we prioritize the safety of both applicants and employees while increasing the efficiency of the recruitment process. Rather than operating the recruitment process from the company's point of view, we will continue to respect the job seeker's position and communicate sincerely to create a job in which the job seeker and the company develop together.

# Ideal Employee of KOLON INDUSTRIES First Choice of Customers One&Only Way Inspired by customers · Reach higher standards Above expectation Systematic action plan Contribute to customers' success • Try my very best Uniqueness Trend leader • Facilitate open collaboration · Initiate new challenge

### **Talent Nurturing System**

We aim to cultivate human resources as our ultimate source and asset of business competitiveness. Accordingly, we establish objectives for individual and organizational capacity enhancement and actively support growth and role fulfillment.

#### Strengthening Capacity of Members

Kolon Industries

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For the successful implementation of the continuously expanding global business, we establish and implement a company-wide human resource development promotion system to simultaneously enhance the organizational and individual capabilities of every employee level. In addition, we establish an annual training plan based on HR trend research and analysis of employee needs, such as satisfaction with training programs and evaluation of on-the-job application, and support various job and position-specific training programs.

Improvement of Organizational Capabilities KOLON INDUSTRIES has established a unique award for executives and team leaders, and established a leadership training system accordingly, providing a variety of programs, including promotions, to enhance leadership competency at each stage. Through this, we are supporting growth as a leader suitable for the company and fulfilling the role.

Improvement of Individual Capabilities KOLON INDUSTRIES provides a variety of training courses aimed at improving the knowledge and skills required for each job and the job performance skills required to perform specific roles. In particular, by actively nurturing and utilizing in-house instructors, we are operating various job courses that can be immediately applied to the field.

### Organizational Capability Improvement Programs

In order to strategically nurture capable leaders who can successfully lead businesses and organizations, KOLON INDUSTRIES establishes expected roles and necessary competencies according to the four-step leadership line: executive, team leader/chief, senior, and junior rank. In particular, we continuously strengthen organizational capabilities by deriving the leadership capabilities of executives and team leaders who have a high impact on the business in detail, nurturing leaders with the relevant leadership capabilities, and operating a leadership program to promote the effective performance of leaders.

KOLON INDUSTRIES' Leadership Education The leadership training of KOLON INDUSTRIES is operated to cultivate a balance between work management for creating performances and people management for vitalizing communication within the organization and coaching/nurturing juniors. For executives, management courses and coaching courses are in place to fulfill their roles as managers. In addition, the program for team leaders (seniors) who are responsible for on-site performance at the forefront provides training programs focusing on their role as a team leader, leading the team's performance, and leading the growth of team members. In particular, through diagnosis, we provide support to continuously check and develop one's leadership competency level. Middle managers who lead the work are also provided with training on cross-linked followership according to their necessary competencies, and new employees are supported to settle down and grow stably within the organization by increasing their immersion and self-direction in their work. In addition, in line with the characteristics of the manufacturing industry, we are operating a field manager course for field managers and part heads to strengthen communication-based leadership at the production site.

### Individual Capability Improvement Programs

Based on the firm belief that the competency of each employee is directly related to the competitiveness of the company, we are operating various training programs to improve individual competency. Various in-house job training courses are provided to improve the job professionalism of beginner workers, and job performance capabilities are enhanced through strategic thinking courses, in-house MBA courses, and degree courses. In addition, we support domestic and overseas graduate schools of science and engineering and domestic MBA programs only for key personnel, while continuously strengthening the company's technological and management capabilities. In addition, we support on-site training courses such as seminars by experts and in-house special lectures, centered on each headquarters and department.

#### Status of Education Investments

Education Expenditure for Employees(Unit: KRW Billion)

2019	2020	2021
19.3	10.3	11.7

Job Competency Improvement Program Job-specific in-house job courses are being operated to improve job competency by job groups, such as production/technology, R&D, and sales. By actively nurturing and utilizing in-house instructors, we design training programs that can be applied immediately in the field to support the growth of job experts.

Job Skill Improvement Program A strategic thinking process is being operated to enable customer-oriented thinking and work from a comprehensive mid-to-long-term perspective Through on/off blended inhouse MBA courses for middle managers, we are enhancing our overall management knowledge and strengthening our decision-making and problem-solving capabilities from a company-wide perspective. In addition, the smart learning platform provides an educational environment that enables learning that reflects individual educational needs anytime, anywhere, even in non-face-to-face situations.

#### Advancement of Evaluation System

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In terms of the evaluation method, we have improved to enable more accurate evaluation by switching from the relative evaluation method, which sets the compulsory distribution ratio in the six-step evaluation grade unit, to the absolute evaluation method, which abolished the forced distribution ratio. In addition, the fairness and transparency of the evaluation process have been enhanced by establishing an "Open Session," a process to discuss the evaluation grade in the process of calculating the evaluation grade. In particular, we tried to enhance the connection between work and the evaluation process by strengthening the communication function and supporting performance management at all times so that the evaluator and the evaluatee can communicate with each other smoothly throughout the entire evaluation process. In addition, through evaluation monitoring, objective and fair evaluations are made, and evaluation of the subject's satisfaction is conducted periodically to verify and reinforce the evaluation capabilities of evaluators. KOLON INDUSTRIES operates the Management by Objectives (MBO), an individual goal management system for all employees every year, and based on the results of regular evaluation, fair compensation such as salary increases, position promotions, and rewards is given to encourage performance improvement. In particular, we are operating an evaluation system centered on coaching and training so that the entire evaluation process can be linked with the improvement of employee performance. To this end, a balanced evaluation of achievements and competencies is possible by adding competency diagnosis to individual evaluation, which used to be evaluated based on achievements, and dualizing evaluation factors.

#### Fair Compensation

KOLON INDUSTRIES has established and is operating a performance-oriented fair compensation system based on the results of performance evaluation. We have implemented a cumulative annual salary system for employees above manager level in general/research positions so that employees can receive compensations corresponding to their performance. Under the cumulative annual salary system, an individual's annual salary is defined according to the performance grade in the previous year, and high-performing employees can receive higher salaries than those at higher

#### **Major Improvements** of Evaluation System



Improvement in the way that performance evaluation and competency diagnosis are evaluated in a balanced way during the individual evaluation

change to absolute evaluation

 Performance evaluation evaluates the level of achievement of the goal, and competency diagnosis evaluates the level of competitiveness for achieving the goal

Introduction of hybrid evaluation system as a transition stage for Introduction of Open Session for evaluation based on consultation/

- Reinforce communication to enable training and coaching through
- Regular one-on-one interviews between the evaluator and the evaluator through regular inspections

Enhancement of Evaluation Monitoring

einforcement of

Inducement of fair evaluation through evaluation error verification mprove evaluator competency through evaluation and feedback on the entire evaluation process

#### Remuneration for Employees(Unit: KRW thousand)

Category			2019	2020	2021
Total Yearly Remuneration	Total		205,280,960	199,593,008	237,998,754
Average	Total		74,458	70,627	85,274
Remuneration Per Person	Male	Average Remuneration Per Male Employe	76,199	72,526	87,208
1 (13011	Female	Average Remuneration Per Female Employee	58,873	55,436	70,445

levels. For general workers and researchers below the managing level as well as workers in general, technical, and special employment positions, the standard annual salary table is applied so that we can reward them fairly without impartial discrimination due to personal factors such as gender and age. In January 2021, the compensation system was reorganized according to the rank reshuffle, and as the compensation system was reorganized, a briefing session was held for all employees about the reorganized compensation and welfare system, and related materials were posted on the company intranet. The reorganized compensation system is an item that determines an individual's annual salary. In addition to the performance evaluation grade of the previous year, we have added the achievement of organizational performance as well as

expanded the scope of possible salary increases to promote work motivation.

In addition to the compensation system for individual performance, the company employs a performance-based pay system to reward the performance of the company's management. Since 2011, the performance incentive system has been administered in two ways: the Performance Incentive (PI) system, which compensates for the achievement of the company's management performance goals, and the Profit Sharing (PS) system, which rewards individuals with profits that exceed certain business performance standards. Beginning in 2022, the system has been augmented in accordance with the current business climate and shared with employees via briefing sessions.





#### **RISK & OPPORTUNITY**

#### **RELATED MATERIALITY ISSUES**

- **TARGET** Expansion of businesses obligated to sign the Integrity Contract Implementation
  - Reflection and evaluation of CSR evaluation items on the supplier checklist prior to the

#### **2021 PERFORMANCE**







Execution of a win-win fund to BPs as loan funds

22 billion



Supported the training from 68 BPs









# Win-Win Growth Promotion System

As the importance of supply chain network capabilities involving suppliers increases in the global business environment, win-win growth with suppliers has become an essential element for ensuring a company's sustainable competitiveness.

#### Win-Win Growth Program

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For KOLON INDUSTRIES to achieve sustainable growth, it is essential for suppliers to stabilize their business and improve their competitiveness. By concluding standard fair trade agreements with its BPs, KOLON INDUSTRIES seeks to ensure a transparent and fair trading environment. Through a variety of win-win growth programs for BPs, such as financial support, technical support, and education support, we are constructing a cycle of sustainable growth and enhancing developmental partnerships through communication programs that strengthen mutual ties. In recognition of these efforts, KOLON INDUSTRIES has acquired a satisfactory grade in the win-win growth evaluation in the mutual growth index survey conducted by the Win-Win Growth Committee every year.

#### **Financial Support**

Through direct financial support worth KRW 3.5 billion in 2021, subcontract payments were paid early before holidays such as Lunar New Year and Chuseok. In addition, to alleviate funding issues of suppliers, we operated a win-win fund worth KRW 5 billion with approximately 1%p cheaper interest rates than the market rates, of which KRW 2.2 billion was used as a loan to suppliers. In addition, resident BPs received special financial support, such as the Sharing Love Fund.

#### **Technical and Educational Support**

Since May 2018, by operating the joint training center for the CHAMP, we have provided a workforce management system including job competency development education and human resource development for workers of BPs. In 2021, we supported our BPs with computerized and production management systems, such as product warehousing, shipment, and inventory management, and promoted four joint R&D projects with them. In case there is a demand from BP, free customized education tailored to their needs is made available. In 2021, 68 BPs were provided with assistance for the education of 502 employees.

#### Achieving Win-Win Growth through Win-Win Cooperation

#### Win-Win Growth Program



- Win-win fund operation
- Special financial support for COVID-19
- Exemption of defect performance guarantee certificates for construction contracts and purchase orders



- Technical support through joint R&D
- Company-wide support such as production management system



- Job training for suppliers through the joint training center for the Consortium for HRD Ability Magnified Program (CHAMP)
- Supplier CSR training



- Online purchase portal system operation
- Operation of communication reinforcement program

#### **Communication Support**

To create greater synergy effects by establishing partnerships with suppliers and forming a consensus, we have established a constant communication channel for BPs, such as listening to their opinions and providing grievance counseling via the purchasing portal system. We collect and incorporate BPs' challenges and suggestions for system improvement into our work. On the website, violations of ethical management, such as unfair trade practices or BP misconduct by KOLON INDUSTRIES employees, can be reported. A direct reporting system has been established between the Dispute Mediation Chairperson and the CEO to expeditiously resolve disputes in the event of a disagreement.

#### Communication Support and Grievances Consultation for BPs

- 1 | Win-Win Growth Program
- 2 | Win-Win Fund
- 3 | Joint R&D
- 4 | Terms of Payment
- 5 | Suggestions for Improvement of Other Transaction-Related Difficulties and Systems

#### Performance of the joint training center for the Consortium for HRD Ability Magnified Program (CHAMP)

Category	2019	2020	2021
Suppliers (Unit: Suppliers)	81	71	68
No. of participants (Unit: Persons)	501	299	502

# **Supply Chain ESG Management**

By establishing a sustainable supply chain that includes all suppliers involved, such as raw materials, manufacturing, distribution, and logistics, we manage economic, social, and environmental impacts for sustainable value creation that goes beyond the maximization of efficiency and profit.

**FOOTPRINT** 

#### **Supplier Code of Conduct**

"The Code of Conduct applies to all types of organizations that design, sell, manufacture, or provide all products and services used in the production of KOLON INDUSTRIES products, and all sub-contractors that provide assembly, parts, raw materials, and packaging to the relevant suppliers. must also be required to comply with it"

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- Declaration of commitment to self compliance
- Management duties and responsibilities
- Responding to legal and customer requirements
- Risk management
- Goal management
- Education
- Employee feedback, participation and grievance handling
- Documentation and records

- Industrial safety
- Emergency preparedness
- Prevention of occupational accidents and diseases
- Harmful factor management
- Facility safety management Dormitory/sanitary facilities provided
- Safety and health training

- Compliance with environmental
- Prevention of environmental
- pollution and reduction of
- resource/energy use
- Chemical management
- Waste and wastewater management
- Air pollution management Energy consumption and GHG management

- · Integrity and prohibition of unfair profits
- Disclosure
- Intellectual property protection
- Privacy protection
- Legal material management

- Declaration of commitment to self compliance
- Management duties and responsibilities
- Responding to legal and customer requirements
- Risk management
- Goal management
- Education
- Employee feedback, participation and grievance handling
- Documentation and records

#### Status of Suppliers Pledging for Compliance with Human Rights and Ethics

Category		Unit	2019	2020	2021
Key Suppliers		Suppliers	69	72	89
No. of Suppliers Pledging among Key Supplier	rs	Suppliers	11	21	31
Ratio of Suppliers Pledging among Key Suppli	ers	%	15.9	29.2	34.8
Ratio of Contracts among Key Suppliers that Included Provisions on the Environment and Human Rights	Suppliers that Included Provisions on the Environment and Human Rights	Suppliers	11	21	31
	Total suppliers	Suppliers	27	72	89
	Ratio	%	40.7	29.2	34.8

<sup>\*</sup> The production of our PET tire cord, industrial yarn, and film raw materials requires the use of PTA and MEG, which are supplied by domestic partners. (Refer to p.22 of KOLON INDUSTRIES' 12th annual business report for information regarding raw materials and manufacturing facilities)

#### Supply Chain Management Policy

In order to prevent risks that may occur within the supply chain in advance and to extend responsible and sustainable management throughout the supply chain, KOLON INDUSTRIES established the "Supplier Code of Conduct" in 2019. The Code of Conduct was established based on global standards and guidelines such as the UN Global Compact, the ILO Convention Standards, and the UN Universal Declaration of Human Rights, and detailed sustainability management standards are presented. It also provides detailed expectations for suppliers in five areas: labor human rights, safety and health, environmental protection, ethical management, and management system. In addition, the Code of Conduct applies to all types of organizations that design, sell, manufacture, or provide all products and services used in the production of KOLON INDUSTRIES products, and all sub-contractors that provide assembly, parts, raw materials, and packaging to the relevant suppliers must also be required to comply with it.

### Supply Chain Management Policy Implementation

To implement practical observance and practice of the Supplier Code of Conduct, KOLON INDUSTRIES strives to minimize risk throughout our supply chain, by including the pledge to comply with the Supplier Code of Conduct and the pledge to fulfill the integrity contract in the contract since 2020. In case of violation, it is stipulated that strong sanctions such as cancellation of contract and permanent expulsion may be taken if the request for improvement is not fulfilled. In 2019, we established an integrity contract implementation pledge form for suppliers and customers, and from 2020, we have made pledges to prohibit collusion, prohibit unfair profit, and manage human rights risks through the pledge of integrity contract implementation. In addition, we are making efforts to preemptively minimize supply chain risks by requesting a pledge of integrity contract implementation from customers and suppliers when signing new contracts. The pledge also makes it clear that any violation could bring disadvantages to them such as the cancellation of contract or the disqualification from bidding. KOLON INDUSTRIES continues to include more existing and new suppliers to make the pledge.

<sup>\*</sup> Suppliers with an annual transaction volume of at least KRW 1 billion qualify as key suppliers.



#### Supplier CSR Assessment

To ensure that the Supplier Code of Conduct is effectively implemented, KOLON INDUSTRIES has added the CSR category in the audit on suppliers which is conducted according to the annual audit plan.

CSR assessment is conducted with 14 indicators in areas of human right/labor, EHS, and fair operation. The evaluation result is classified into A to E grades, and they are reflected in contract/bidding evaluation and the following audit. As it was difficult to conduct CSR evaluation due to COVID-19, we have conducted written/online evaluation. We are expanding CSR audit evaluation on more subcontractors every year.

#### Results of Supplier CSR Audit

Category		Unit	2019	2020	2021
Total No. of Suppliers		Suppliers	374	416	407
Suppliers Newly Registered to 1st-Tier	Suppliers	Suppliers	15	41	18
Ratio of Suppliers Having Completed the CSR Audit	Suppliers Having Completed the CSR Audit	Suppliers	61	86	76
	Total suppliers	Suppliers	374	416	407
	Ratio	%	16.3	20.7	18.7
No. of Suppliers Having Received Recom	mendation for Improvement after the CSR Audit	Suppliers	0	0	0
No. of Suppliers Suspended after the CSR Audit		Suppliers	0	0	0
No. of Suppliers Suspended Temporarily or Permanently		Suppliers	0	0	0

<sup>\*</sup> At the bottom of the table, there was no significant impact identified as a result of the CSR evaluation of suppliers.

#### ESG Zoom In

#### Conflict Minerals Management System and Code of Conduct for Sustainable Supply Chain

Conflict minerals refer to minerals produced in conflict areas such as Africa. To participate in the global movement to prevent exploitation of civilian labor by guerrillas or rebels during the mining process, KOLON INDUSTRIES does not purchase minerals including gold, tin, tantalum and tungsten coming from dispute areas to prevent human rights infringement within the supply chain. We make sure to procure minerals mined only in accordance with global standards of the U.S., EU, or OECD. We have also screened the information on suppliers registered on our purchase portal system to ensure that the purchase of conflict minerals is blocked, and stipulated the ban on the use of conflict minerals in the Supplier Code of Conduct.

#### KOLON INDUSTRIES' Supplier Code of Conduct — Article 5. Legal Materials Management

"Suppliers are not allowed to use raw materials including conflict minerals obtained through illegal or unethical methods that bring about severe human rights abuse or environmental pollution. It is a duty for suppliers to manage the use of materials throughout their whole supply chain including the origin of materials and their accounts. And suppliers must submit guarantees and data on the origin and their suppliers of raw materials upon KOLON INDUSTRIES' request







# **COMMUNITY ENGAGEMENT**

As local community is a partner among key stakeholders of the company, it is imperative to maintain a win-win relationship and create social values beyond engaging in CSR activities. This report includes KOLON INDUSTRIES' activities aiming at creating sustainable values as a member of local community.









#### **RISK & OPPORTUNITY**

to the industry we are in. For instance, we have developed upcycling products by launching a sustainable and stakeholders. Through these social contribution activities, we intend to create shared values together

- Continuously identifying various programs aiming at contributing to local community service
- KOLON SPORT: Expansion of eco-friendly activities through collaboration with diverse
- Promoting regional coexistence in Korea based on regions at risk of population extinction

#### **2021 PERFORMANCE**



with Gangseo-gu Office for creating social values of local communities, and engaged in volunteer works





RE;CODE upcycled a soccer player Lee Dong-guk's uniform and banner used in his retirement ceremony





Mobile Energy School "Eco Long Long" met with 106,830 students, visited 1.276 schools

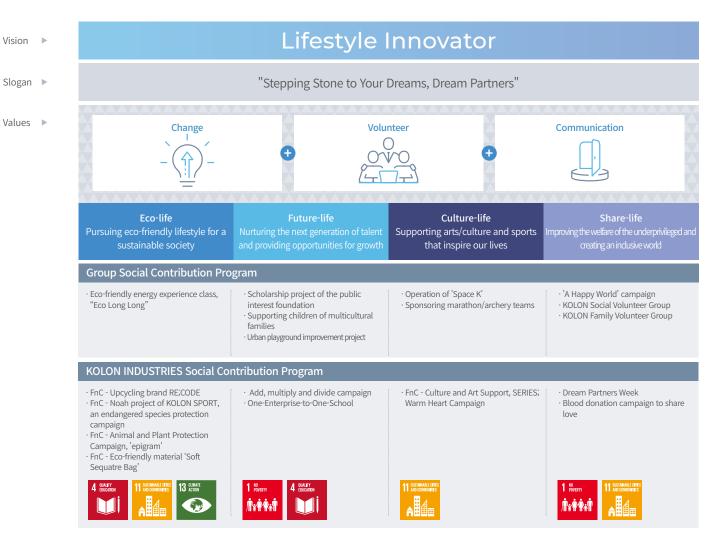


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# **Local Community Engagement System**

On the basis of the management philosophy that corporate profits are derived from society, we engage in a variety of social contribution activities to foster mutual trust and promote coexistence with the local community. We will actively contribute to the development of local communities through the creation of sustainable values in KOLON INDUSTRIES' true business areas.



#### **KOLON INDUSTRIES Headquarters and Business Sites Activities**

KOLON INDUSTRIES headquarters and business sites engage in various local community contribution activities in addition to the group's social contribution activities.

**Headquarters** we have signed the agreement on social contribution activities with Gangseo-gu Office for creating social values of local community. To provide multi-language subtitle service for digitally underprivileged group including multicultural families and foreigners living in Gangseo-gu, we carry out the volunteer work of translating subtitles into different languages such as English, Japanese and Chinese every week with employees' talent donation. We have also provided daily necessities to seniors living alone during holidays and winter in connection with Gangseo-gu Senior Citizens Welfare Center. Due to COVID-19, we adopted a non-face-to-face method, delivering items at their doorsteps. We are committed to fulfilling our social responsibilities by maintaining a strong relationship with local communities. In addition, we plan to review various programs of contributing to local community volunteer work.

**Business Sites** Each business site is undertaking volunteer works of bath, food assistance and cleaning service, and by forging a partnership between enterprise-community and enterprise-school, we engage in diverse programs including helping hands in harvesting season and supporting school events.





Visiting Energy School "Eco Long Long"

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Students we met



106,830 Students

Schools we visited



1.276 schools

Distance we traveled



192,213<sub>km</sub>

\*Status of Eco Long Long Activities (As of the end of Dec. 2021)

### Fco-life

#### Upcycling Brand RE;CODE

RE;CODE is a representative sustainable fashion brand in Korea launched in 2012 with the slogan of "This is not just Fashion." It creates new value based on upcycling, which recombines discarded clothing inventory to create new clothes. It also creates new uses by changing the way we think about the stereotypes of fashion. As "sustainable" fashion continues to be in the spotlight in the current fashion industry, RE;CODE is a leading brand in the field and is evaluated as an exemplary case in regard to ethical consumption and CSR activities.

Uniform Upcycling Project K-league legend, Lee Dong-guk, had his retirement ceremony on November 1, 2020. A large-size uniform used in his retirement ceremony was upcycled and turned into a bag when it met with the sustainable fashion brand, RE:CODE. Products made in a limited quantity of 200 has a numbering label, adding more value to the product. They are also designed in a reversible way with Lee Dong-guk's uniform on one side and the recycled vehicle air bag on the other side. They are lightweight and added with more utility by equipping them with packable elements.

#### **KOLON SPORT Noah Project**

The Noah Project is a campaign that has been running since 2016 to protect endangered animals and plants in Korea. Each season, one type of plant and animal is selected to launch a capsule collection and a portion of the proceeds are donated. In the 21SS season, as part of our initiative to protect the Cotoneaster wilsonii Nakai, which is designated as Natural Monument No. 51 and a class II endangered plant, we released new raincoats, jackets, jumpsuits, dresses, shirts, jogger pants, and bandanas using recycled materials, eco-friendly dyeing, and eco-manufacturing techniques. In addition, we have invited content creators engaging in various environmental conservation activities and held a photoshoot of Noah 2021 SS collection campaign. We have also donated KRW 10 million to Sejong National Arboretum for preservation of rare plants. In the 21FW season, we have carried out activities to promote

endangered plants in Korea under the theme of Scrophularia takesimensis Nakai endemic to the shore of Ulleungdo Island, which is the endangered wild plant class II. We undertook upcycling RE;BIRSTOCK down activities of using eco-friendly materials (recycled natural extracts) for all outer fabric and filler of clothes\* and collecting, screening, and processing goose down filler from KS down jackets before incineration for reuse in new down jacket. In the 22SS season, the 10th Noah Project, which focuses on raising awareness of seals, also known as "sea leopards," includes a product with a graphic print expressing the pattern of a seal and the color of the ocean in a watercolor style. In addition, raincoats, windbreakers, T-shirts, and bucket hats fashioned from biodegradable materials and recycled yarns were included in the collection.

\*Excluding some irreplaceable materials

\*Donation of Noah Project: KRW 20 million (Sejong National Arboretum, Endemic Plants Garden)

#### Eco Long Long, Eco-Friendly Energy Experience Class

'Launched in 2009 by KOLON Group, "Visiting Energy School, Eco Long Long" is Korea's first mobile energy school. Education is provided three days a week in specially modified vehicles so that children can directly experience the principles of eco-friendly energy. In addition, during vacations, special education is provided to children from underprivileged groups by visiting rural areas, welfare centers, and after-school learning institute. In addition, an eco-friendly energy experience exhibition hall is operated on the first floor of the Magok office building, providing more diverse and in-depth experience education. From 2020 to 2021, online and offline education was conducted in line with the online classes during COVID-19. Moreover, a 10-year report on educational achievements over the past decade was produced and distributed to schools and institutions. As we also consider the continuous development of program important, we are committed to developing a board game program for problemsolving and facilitating discussion on climate change and carbon neutrality, which are the most important environmental issues of today.



#### Sales of epigram's Endangered Animals and Plants Campaign T-Shirts(Unit: KRW 10,000)

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2019	2020	2021
KRW 319 million	KRW 485 million	KRW 822 million

#### **Epigram**

Animal and Plant Protection Campaign epigram has been running the Endangered Animals and Plants Campaign since 2017 to share the indepth stories about the existence of the animals and plants living next to us and the situation they are in. Clothing is made with graphic or artwork images of animals and plants, and clothing and products made with reusable and eco-friendly materials are introduced at the store. Various stories have been told, including green sea turtles, euplexaura crassa, sesarma intermedium, Korean finless porpoise, otters losing their nests due to river pollution, leopard cats that are endangered due to roadkill and reckless hunting, native cattle, Natural Monument Korean relict longhorned beetle, black-veined white butterfly and dung beetle. In the 21SS season, we spread a story about Korean dogs, collaborated with Paw In Hand to promote adoption of abandoned dogs, and donated the proceeds from the product to the Paw in Hand. For the 22SS season, we released a T-shirt with an extinct animal motif.

Local Project, Almost Home Stay epigram has started a local project to share the unknown beauty of Korea's small cities. After selecting one region for a season, the color of the region is expressed through clothing with local items designed into the lifestyle products. For instance, the 2021 FW season took place in Nonsan. Accommodation spaces were recreated with minimal retouching, instead of total remodeling. And an experience program was launched to encourage more people and the young generation to enjoy the indigenous local beauty in epigram style. In addition, we have promoted and expanded the online and offline sales of local specialties by repackaging them and using epigram's distribution channel.

### "Recycling Face Mask Waste" as a part of Go Go Challenge

KOLON GROUP has been implementing themed practices to reduce plastic use and preserve the environment by recycling a disposable face mask as part of the eco-friendly campaign, "Go Go Challenge." As the COVID pandemic persists, about 20 million face masks are disposed every day. Unfortunately, there is no guideline for proper disposal. Focusing on the fact that face masks which take 450 years to decompose are indiscreetly discarded, KOLON INDUSTRIES came up with a way to solve both an environmental issue and value creation by recycling. To that end, we have transformed face mask waste into polypropylene pellets through pyrolysis in replacement for plastic. Utilizing this, we have engaged in programs of recycling resources and preventing environmental pollution. Since October 2021, we have installed face mask collection boxes at seven major business sites for recycling of face masks used by employees, and encouraged employees to give away face masks in a provided envelope after removing nose bridge stripe (nose wire) and ear loops.

### Zero Paper Cup Campaign

In line with the Ministry of Environment's regulations on disposable items and a money-back scheme for paper cup, we have launched "Zero Paper Cup Campaign" to solve environmental problems by reducing carbon emissions. It was implemented in a "Conserve, Share, Exchange, Reuse" motto with a mindset that the genuine action for environment starts from not producing unnecessary products. Employees are encouraged to donate unused, new mug cups or tumbler cups, and they are handed down to others who want them. We reward employees who have donated mug cup or tumbler with a voucher at Beard Papa's, and employees in need of multi-use cups are encouraged to make free donation to KOLON Charity Fund (KFC) before acquisition, which have added the meaning of sharing. Along with this, the event to solve inconvenience in using multi-use cups has taken place with Beard Papa's providing a cup cleaning service for those bringing multi-use cups.

#### Future-life

#### Scholarship Program

KOLON Group is carrying out support projects to nurture young talent through the Oh-woon Cultural Foundation, established in 1981, and the Flower and Little Prince Foundation, established in 2002. With a goal of cultivating talents and developing a healthy youth, the Oh-woon Cultural Foundation has been offering scholarship programs since 1982 and currently provides opportunities for high schoolers who are pursuing education in a challenged situation. The Flower and Little Prince Foundation, established to engage in programs that encourage hopes and dreams of children with a mindset of Little Prince taking care of a flower, has been providing scholarships since 2004. We selected outstanding six graders who never stop dreaming despite of difficulties that they face and provided scholarships for three years. We are also holding "KOLON Children Dream Camp" every year, which consists of career experience and self-confidence building programs. In 2021, we provided scholarships worth nearly KRW 160 million to a total of 94 students.

#### Culture-life

"Space K Seoul" is KOLON's culture and art open space that started in Gwacheon in 2011. Expanded and opened in September 2020, Space K Seoul is KOLON's differentiated arts and social contribution activities using art under the vision of "enriching life through art." We have provided support and sponsored artists to encourage strenuous commitment to creativity works by offering exhibition opportunities to new artists and lesser-known middle-aged artists in Korea and by introducing global artists who are relatively unknown to Koreans. In 2021, Space K Seoul has hosted exhibitions of emerging artists including Hernan Bas, Ryan Gander and Neo Rauch & Rosa Loy, and about 39,297 people have visited in a year.

#### Share-life

#### **Dream Partners Week**

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KOLON Group conducts sharing activities with the group through Dream Partners Week, a designated volunteer week every year. In 2020, volunteer activities were conducted in a non-face-to-face manner under the theme of sustainable environment as part of ESG management. At the last year's Dream Partners Week, we launched a plogging marathon near Magok and Gwacheon sites. This year, we have expanded the program by additionally adding two sites: Gumi and Gimcheon. For abandoned dogs which are exposed to stress while living in a limited living space due to nationwide shortage in animal shelter, KOLON INDUSTRIES employees have made snuffle mats for abandoned dogs to relieve stress by sniff and searching out hidden treats. The mat is made from fabric, clothes and materials in the company's stock. The collaboration with upcycling brand "RE;CODE" provided an opportunity to remind of the meaning of upcycling in which new values can be created from abandoned things. The snuffle mat made by employees were delivered to the animal shelter through a social enterprise, Vanilla.

<u>Plogging</u> Plogging — a combination of the Swedish word "plocka upp," which means "to gather grains," and the English word "jogging" — refers to an exercise involving the collection of trash while jogging.

#### **KOLON Social Volunteer Group**

KOLON Group established the KOLON Volunteer Group in 2012 and integrated social contribution activities carried out by each affiliate to make activities more systematic and substantial. One of the representative programs of KOLON Social Volunteer Group is "Hello Dream" which is undertaken under the slogan of "Stepping Stone to Your Dreams, Dream Partners." Hello Dream supports children to grow with a dream for the future through talent donation and hard work of employees. We are running various programs such as Vision Dream, Hope Dream, and Healthy Dream so that unprivileged children or those suffering from illness can fulfill their dreams.

#### Blood Drive Campaign to Share Love

KOLON INDUSTRIES has carried out a blood drive of sharing love under the blood crisis of low donor turnout due to the spread of COVID-19 variants and the arrival of travel season. As KOLON INDUSTRIES' representative social contribution program, a blood drive has been taken place since 2013, and a total of nearly 5,500 bags were donated to Korea Childhood Leukemia Foundation for pediatric cancer patients. Starting with KOLON Tower in Gwacheon, it was conducted sequentially at eight business sites across the country, including Magok, Gumi, Gimcheon, Gyeongsan, and Daejeon, in summer and winter. We have encouraged and awarded the corporate blood donation campaign by holding a "King of Blood Donors at KOLON".

#### 2021 KOLON Volunteer Group Activities

Category	2021 Activities
Total No. of Volunteers	601 persons
Total No. of Activities	60 times
Total Hours of Activities	2,312 hours



# LIFESTYLE INNOVATOR FACTBOOK

Financial Performance	
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# **FACTBOOK**

# **BUSINESS**

#### **Condensed Consolidated Financial Statements**

Category		Unit	2019	2020	2021
Assets	Current assets	KRW million	2,079,126	1,869,994	2,213,219
	Non-current assets	KRW million	3,213,977	3,173,694	3,388,066
	Total assets	KRW million	5,293,103	5,043,688	5,601,285
Liability	Current liabilities	KRW million	2,245,001	2,154,433	2,232,370
	Non-current liabilities	KRW million	921,765	597,211	818,349
	Total liabilities	KRW million	3,166,766	2,751,644	3,050,719
Equity	Ownership of the parent company	KRW million	32,486	203,430	189,156
	Non-controlling standard	KRW million	-10,365	2,082	14,668
	Total equity	KRW million	47,155	205,512	178,792

#### Condensed Consolidated Comprehensive Income Statement

Category	Unit	2019	2020	2021	Note
Sales	KRW million	4,407,190	3,970,264	4,662,050	
Cost of Sales	KRW million	3,276,089	2,934,573	3,360,172	
Gross profit on sales	KRW million	1,131,101	1,035,691	1,301,879	
Operating income	KRW million	172,948	163,245	252,713	
Income before income tax expense	KRW million	83,435	321,635	278,053	
Net profit	KRW million	22,122	205,512	203,825	
Comprehensive profit and loss	KRW million	-52,301	192,995	293,097	
Comprehensive profit and loss(Shares owned by the parent company)	KRW million	-44,253	189,972	277,952	



# Condensed Consolidated Income Status by Business Division

Category		Unit	2019	2020	2021	Note
Industrial materials	Net sales	KRW million	1,900,822	1,718,270	1,998,232	
	Operating income	KRW million	80,681	71,343	147,988	
Chemicals	Net sales	KRW million	760,196	705,759	915,562	
	Operating income	KRW million	74,702	78,984	79,946	
Film/electric materials	Net sales	KRW million	592,250	578,679	609,231	
	Operating income	KRW million	23,189	31,226	21,661	
Fashion	Net sales	KRW million	972,932	868,018	1,018,145	
	Operating income	KRW million	13,529	-10,710	29,097	
Others and fashion materials	Net sales	KRW million	180,991	99,538	120,880	
	Operating income	KRW million	-19,152	-7,598	-25,979	

#### Economic performance distribution

Category		Unit	2019	2020	2021	Note
Government	Corporate tax	KRW million	24,076	107,437	53,473	
Shareholders	Total dividends	KRW million	26,910	29,885	39,511	

#### R&D Investment

Kolon Industries

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Category		Unit	2019	2020	2021	Note
R&D Investment		KRW million	97,386	101,021	102,346	Based on the business report (sum of R&D expenses and government subsidies)
R&D Investment (Plan)		KRW million	60,936	57,420	56,591	Manufacturing sector
Domestic Patent	Registered	Case	1,337	1,367	1,443	Based on business report (cumulative)
	Applied	Case	659	634	550	
Domestic Trademark	Registered	Case	1,789	1,832	1,929	
	Applied	Case	111	197	212	
Overseas Patent	Registered	Case	1,227	1,284	1,307	
	Applied	Case	447	517	554	
Overseas Trademark	Registered	Case	1,600	1,763	1,905	
	Applied	Case	217	158	160	

# **FACTBOOK**

# **Environment**

Kolon Industries

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#### Raw materials

Category		Unit	2019	2020	2021	Note
Packaging recycling ratio	Recycled packaging material	EA	1,569,995	1,834,238	2,093,452	Calculation criteria: When packaging materials of our products are returned from our customers and reused Major Packaging Materials by Industrial Sector Theadquarters Film (including MTL): Wood pallet, wood plywood, FWP-CORE The Headquarters Image Material: ABS Core, Danpla box/sheet  Headquarters High Renol/Hyroxy: Dangerous Goods Container (Poly-tank, Metal Tank)

#### Environmental investment

Category		Unit	2019	2020	2021	Note
Environmental investment Cost	Target	KRW million	4,634	3,457	4,806	
	Performance	KRW million	2,701	2,155	3,217	
	Implementation rate	%	58.3	62.4	66.9	

#### **Eco-Friendly Procurement**

Category		Unit	2019	2020	2021	Note
Recycled raw materials purchased for packaging ratio	Raw material purchase amount for recycled packaging materials	KRW million	4,395	4,588	4,869	
	Total packaging raw material purchase amount	KRW million	44,452	40,972	45,860	
	Ratio	%	9.9	11.2	10.6	
Sustainable Materials Purchased		ton	9,620	10,400	10,503	





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Category		Unit	2019	2020	2021	Note
Water Consumption	Industrial Water	ton	3,857,057	4,173,602	4,366,748	Industrial water usage includes groundwater usage
	Municipal Water	ton	335,632	343,083	387,902	
	Surface Water	ton	667,432	621,310	671,689	
	Total Water Consumption	ton	4,860,121	5,137,995	5,426,339	
Water Reused Ratio	Water Reused	ton	1,940,157	1,818,767	1,751,711	
	Ratio	%	39.9	35.4	32.3	
Ratio of water used in water str	ress areas to total water usage	%	100	100	100	

#### Wastewater

Category		Unit	2019	2020	2021	Note
Wastewater discharge	Wastewater discharge	ton	3,535,683	3,113,167	3,564,575	
	Wastewater recycling	ton	1,872,773	1,741,655	1,692,617	
	Wastewater recycling rate	%	53.0	55.9	47.5	

#### Energy

Category		Unit	2019	2020	2021	Note
	gy produced - Electricity (Internal)	MWh	488	492	506	Tiote .
Energy Consumption	Total Energy Consumption	TJ	11,296	10,853	11,775	
	Total new and renewable energy produced - Electricity (Internal)	MWh	488	492	506	
Energy reduction	Energy reduction	LΣ	2,159	4,465	2,741	Reduce methane by changing boiler fuel at Daesan plant, utilizing steam condensate at Gimcheon 2 plant, reducing the use of stabilizer steam at Yeosu plant, and injecting off gas to #2 boiler
Renewable energy	Renewable energy rate	%	0.016	0.016	0.015	



#### **GHG Management**

Category		Unit	2019	2020	2021	Note
GHG emissions	GHG emissions (Scope 1)	tCO <sub>2</sub> eq	120,162	129,482	138,366	
	GHG emissions (Scope 2)	tCO₂eq	507,814	478,914	504,401	
	Total GHG emissions (Scope 1, 2)	tCO₂eq	627,976	608,396	642,766	
GHG intensity in Manufacturing sector	Total GHG emission (Production unit)	tCO₂eq/ton	0.87	0.93	0.85	The raw unit is based on total production (ton) at the end of the year
GHG Reduction in Manufacturing sector	GHG Reduction (Scope 1)	tCO <sub>2</sub> eq	7,301	11,182	1,942	
	GHG Reduction (Scope 2)	tCO <sub>2</sub> eq	4,609	4,415	2,458	
	Total	tCO₂eq	11,910	15,597	4,400	Reduce methane emission by changing boiler fuel at Daesan plant, utilizing steam condensate at Gimcheon 2 plant, reducing the use of stabilizer steam at Yeosu plant, and injecting off gas to #2 boiler

<sup>\*</sup> Based on production volume

#### Air Pollutants

Category		Unit	2019	2020	2021	Note
Air Pollutants discharge	Nox	ton	1.83	5.97		The concentration and flow rate of each pollutant is
	SOx	ton	0.21	0.09		based on the atmospheric measurement report of the workplace
	PM	ton	2.49	1.51	1.22	workplace
Air Pollutants Concentration	Nox	ppm (mg/m³)	287	272	295	
	SOx	ppm (mg/m³)	30	9	14	
	PM	ppm (mg/m³)	43	50	20	

#### Water pollutants

Category		Unit	2019	2020	2021	Note
Water pollutants discharge	COD Emissions	ton	107.9	117.2	138.2	
	BOD Emissions	ton	61.3	34.4	40.9	
	SS Emissions	ton	49.3	41.6	49.4	



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Category	Unit	2019	2020	2021	Note
General waste generation	ton	27,062	28,783	30,100	· Based on Allbaro system registration
Designated waste generation	ton	25,774	28,775	28,121	Based on Allbaro system registration     Designated waste: waste organic solvents, secondary waste storage batteries containing waste sulfuric acid, waste oil paint, waste reagents, and other waste toxic substance
Construction waste generation	ton	409	381	545	Based on Allbaro system registration     construction waste: waste concrete
Amount of recycle	ton	23,098	25,326	25,550	· Based on Allbaro system registration
Designated waste Recycling rate	%	91.1	90.9	91.6	

#### **Hazardous Chemicals**

Category	Unit	2019	2020	2021	Note
Toxic Chemicals Consumption	ton	64	58	26	
Number of Chemical Leakage Incident	Case	0	0	0	
Chemical Substance Leaked	ton	0	0	0	

<sup>\*</sup> Due to non-implementation of the chemical substance performance report at Gimcheon Plant 1, no data is reflected (planned in July)

# Environmental Management System(ISO14001)

Category		Unit	2019	2020	2021	Note
Environmental Management System(ISO14001)	Domestic sites	Site	8	8	8	
	Overseas Sites	Site	5	5	5	
	Certification Rate	%	86.7	86.7	86.7	



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Category		Unit	2019	2020	2021	Note
Energy management system(ISO50001)	Domestic sites	Site	4	4	4	
	Overseas Sites	Site	0	0	0	
	Certification Rate	%	26.7	26.7	26.7	

#### Violation of Environmental Regulations

Category		Unit	2019	2020	2021	Note
Environmental accident occurrence	Number of occurrences	Case	0	0	1	Refer to KOLON INDUSTRIES' 12th Business Report on page 387
Complaints and responses	Number of occurrences	Case	0	0	0	
Case of non-payment of emission charges	Number of occurrences	Case	0	0	0	
Violation of water resources regulations	Number of sanctions	Case	0	0	1	
	Penalty amount	KRW	0	0	480,000	
Environmental risk assessment conducting rate	Domestic business site	Site	8	8	8	
	Overseas business site	Site	0	0	0	
	Ratio	%	53.3	53.3	53.3	



# Social

Kolon Industries

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#### **Employees Statistics**

Category		Unit	2019	2020	2021	Note
Domestic and foreign employees	Male	Persons	5,109	4,715	4,581	
	Female	Persons	2,485	2,434	2,363	
	Total	Persons	7,594	7,149	6,944	
Domestic and foreign regular employees	Male	Persons	4,249	4,014	4,092	
	Female	Persons	1,739	1,705	1,861	
	Total	Persons	5,988	5,719	5,953	
Domestic and foreign contract employees	Male	Persons	860	701	489	
	Female	Persons	746	729	502	
	Total	Persons	1,606	1,430	991	
Domestic employees (regular+contract)	Male	Persons	2,521	2,461	2,524	
	Female	Persons	291	324	351	
	Total	Persons	2,812	2,785	2,875	
Domestic managers	Male	Persons	681	727	764	Based on the internal position system of KOLON INDUSTRIES
	Female	Persons	96	121	139	
	Total	Persons	777	848	903	
Domestic non-managers	Male	Persons	1,840	1,734	1,760	Based on the internal position system of KOLON INDUSTRIES
	Female	Persons	195	203	212	
	Total	Persons	2,035	1,937	1,972	

<sup>\*</sup> Reporting Boundary Manufacturing sector (domestic/overseas)



Category		Unit	2019	2020	2021	Note
By region	Korea	Persons	2,781	2,738	2,795	
	Asia	Persons	2,337	2,448	2,222	
	China	Persons	1,818	1,341	1,259	
	America/Europe	Persons	627	575	588	
	Total	Persons	7,563	7,102	6,864	The number of employees by region are regular employees only

#### Diversity

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Category		Unit	2019	2020	2021	Note
Ratio of Female Employees	Female employees ratio	%	10.3	11.6	12.2	
	Female employees ratio	%	3.4	4.3	4.8	
	Female Executives ratio	%	0.01	0.03	0.01	
R&D Personnel	Total	Persons	332	371	373	
Disability	Domestic	Persons	42	34	73	
	Overseas	Persons	41	23	18	
	Total	Persons	83	57	91	
Ratio of employees with Disability	Ratio of employees with Disability	%	1.1	0.8	1.3	
Veteran	Domestic	Persons	44	50	48	
Minority groups and/or vulnerable workers employed	Employees with Disability	Persons	83	57	91	
	Female employees	Persons	2,485	2,434	2,363	
	Total	Persons	2,568	2,491	2,454	
	Ratio of minority groups and/or vulnerable employees employed	%	33.8	34.8	35.3	
	Ratio of minority groups and/or vulnerable employees in top management (excluding the board of directors)	%	2.1	3.6	1.8	



#### **New Recruitment Status**

Category			Unit	2019	2020	2021	Note
Domestic and foreign new recruitment Status by Age (regular + contract)	10s	Male	Persons	167	66	67	Over 19 years old
		Female	Persons	186	57	83	
	20s	Male	Persons	1,266	550	745	
		Female	Persons	1,073	295	465	
	30s	Male	Persons	672	224	296	
		Female	Persons	738	242	347	
	40s	Male	Persons	196	46	71	
		Female	Persons	212	47	78	
	50s	Male	Persons	62	12	15	
		Female	Persons	44	7	12	
	60s	Male	Persons	3	0	5	
		Female	Persons	1	0	4	
	Total	Male	Persons	2,366	898	1,199	
		Female	Persons	2,254	648	989	
	Total		Persons	4,620	1,546	2,188	
Ratio of Regional Talents Recruitment	Total		Persons	138	145	145	
Domestic recruitment	Male		Persons	175	197	223	
	Female		Persons	21	35	44	
	Total		Persons	196	232	267	
Overseas recruitment	Male		Persons	2,191	701	976	
	Female		Persons	2,233	613	945	
	Total		Persons	4,424	1,314	1,921	
Domestic and foreign Recruitment total	Total		Persons	4,620	1,546	2,188	

#### Voluntary turnover

Category		Unit	2019	2020	2021	Note
Domestic Voluntary turnover	Korea	Persons	99	83	105	
Overseas Voluntary turnover	Total	Persons	3,107	1,890	2,150	

<sup>\*</sup> Limited to manufacturing sector data



# Remuneration for Employees

Category	Unit	2019	2020	2021	Note
Ratio of Wage for New Employee to Legal Minimum Wage	Times	1.8	1.8		Based on the end of the year     -[Calculation method] Average salary for new employees =     Salary of new employees of the year / The total number of new employees     Statutory annual minimum wage for the year     [Calculation Method] Statutory annual minimum wage = Statutory minimum hourly wage of the year x 48 hours x 52 weeks

# Status of Equal Compensation for Male and Female

Category	Unit	2019	2020	2021	Note
Status of Equal Compensation for Male and Female in management	%	93.4	86.3	86.3	The management position is based on the manager or higher, excluding executives or equivalent
Status of Equal Compensation for Male and Female in non-management	%	96.3	98.4	94.7	Starting salary standard for major business sites (based on headquarters of domestic business sites)

# Status of Maternity Leave and Parental Leave

Category		Unit	2019	2020	2021	Note
Number of Maternity Leave Users	Male	Persons	82	73	88	
	Female	Persons	17	11	21	
	Total	Persons	99	84	109	
Number of Parental Leave Users	Male	Persons	8	3	7	
	Female	Persons	11	20	16	
	Total	Persons	19	23	23	
Ratio of Return After Parental Leave	Male	%	100	100	85.7	[Color Life and and Date of December 1]
	Female	%	100	100	100	
	Total	%	100	100	92.9	
Ratio of Employees Working More than 12 Months After Return	Male	%	87.5	100	100	more than 12 months after returning to work on parental leave =  Number of employees who worked for more than 12 months  among those who returned from parental leave in the previous
	Female	%	90.9	90.0	100	
	Total	%	89.2	95.0	100	

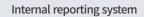


# Operation of Flexible Work Scheme

Category		Unit	2019	2020	2021	Note
Flexible Work Hour Scheme	Male	Persons	228	278	160	
	Female	Persons	11	4	5	
	Total	Persons	239	282	165	
Selective Work Hour Scheme	Male	Persons	5	306	918	
	Female	Persons	3	207	275	
	Total	Persons	8	513	1,193	

#### Status of Education Investments

Category		Unit	2019	2020	2021	Note
Environmental Education	Employees Completed Education	Persons	2,093	1,984	1,942	
	Target employees	Persons	2,096	2,043	1,925	
Safety and health Education	Employees Completed Education	Persons	2,790	2,732	2,768	
	Education Target employees	Persons	2,790	2,732	2,768	
	Resident partner company Employees Completed Education	Persons	1,302	1,284	1,334	
	Resident partner company Education Target employees	Persons	1,302	1,248	1,334	
	Percentage of employees engaged in safety training at partner companies (Compared to employees of the target partner companies)	%	100	100	100	
	Emergency Response Training	Times	173	157	158	
Job Training	Employees Completed Education	Persons	2,652	2,768	2,838	
	Education Target employees	Persons	2,812	2,785	2,875	
Ethics Training	Employees Completed Education	Persons	0	2,363	0	Ethics education shall be conducted every other year, and the subjects of ethics education shall be general positions (excluding executives)
Human Rights Education	Employees Completed Education	Persons	2,691	2,745	2,669	Based on domestic employees
Sustainable Supply Chain Management Training	Employees Completed Education	Persons	16	16	12	A collective education was conducted in 2021
	Education Target employees	Persons	16	16	15	
Information Security Education	Employees Completed Education	Persons	1,536	1,105	2,040	
New and Experienced Worker Security Training	Employees Completed Education	Persons	91	94	109	
	Education Target employees	Persons	91	94	109	
	New and Experienced employees Security Training ratio	Persons	100	100	100	
Education Hour Per Person		Hours/Persons	72.1	72.7	62.8	Based on domestic employees



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Category		Unit	2019	2020	2021	Note
Internal reporting system	Number of applications	Case	1	3	3	Based on domestic employees
	Number of processing cases	Case	1	2	3	
	Percentage of complaints resolved	%	100	66.7	100	

# Status of Regular Evaluation

Category	Unit	2019	2020	2021	Note
Employees Received Regular Evaluation Ratio	%	78.0	83.1	85.4	Based on domestic employees

<sup>\*</sup> Based on domestic business sites

#### Status of Collective Agreement

Category		Unit	2019	2020	2021 Note
Status of Collective Agreement	Ratio of Employees Participate to Union Membership	%	54.7	55.2	Labor union membership rate: union membership among technical employees at the establishment of a union /Total number of technical employees working at all business sites Collective agreement application rate: Total number of technical employees working at the establishment of a labor union / Total number of technical employees at all business sites Total business sites (9): Magok/Gumi/Gimcheon1/Gimcheon2/Gyeongsan/Ulsan/Yeosu/Daesan/Incheon Labor union establishment sites (5): Gumi/Gimcheon 2/Ulsan/Yeosu/Daesan
	Employees coverd by Collective bargaining agreements	%	57.0	58.2	70.1

#### Health check-ups

Category	Unit	2019	2020	2021	Note
Health check-ups ratio	%	97.8	97.0	92.4	

# **Human Rights Management**

Category		Unit	2019	2020	2021	Note
Child labor	No. of domestic child workers	Persons	0	0	0	
	No. of overseas child workers	Persons	0	0	0	
	Total	Persons	0	0	0	

# Safety and Health Management System(ISO45001)

Category		Unit	2019	2020	2021	Note
Safety and Health Management System(ISO45001)	Domestic sites	Site	6	6	6	
	Overseas Sites	Site	1	1	1	
	Certification Rate	%	46.7	46.7	46.7	

#### Lost Time Incident Rate

Kolon Industries

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Category		Unit	2019	2020	2021	Note
Lost Time Incident Rate	LTIFR (Lost Time Injury Frequency Rate)		0.61	0.31	0.91	Based on the end of the year Calculated based Industrial accident care approval/ rejection confirmation in the form of the Korea Workers' Compensation and Welfare Service Center [Calculation method] Lost Time Injury Frequency Rate (LTIFR) for direct employment = (total number of labor loss disasters × 1,000,000) / total working hours

#### Lost Time Injury Severity Rate

Category		Unit	2019	2020	2021	Note
Lost Time Injury Severity Rate	LTISR (Lost Time Injury Severity Rate)		0.054	0.049	0.087	· Based the end of the year Lost Time Incident Severity rate(LTISR) for Direct Employment = (Days lost because of lost time injuries) × 1,000 / Total working hours

#### Social Contribution Investment & Performance

Category		Unit	2019	2020	2021	Note
Cash Donations	Total	KRW million	1,226	2,239	1,071	
Scholarship program management performance	Scholarship Support Amount	KRW million	270	300	300	
Scholarship program management performance	Scholarship Support Amount	Persons	98	96	94	
Win-win Funds		KRW million	5,000	5,000	5,000	
Total Social Contribution Expenditure		KRW million	1,243	2,247	1,076	
Total Volunteering Hours of Employees		Hours	9,111	3,231	2,312	





# KOLON Volunteer Groups Activities

Category		Unit	2019	2020	2021	Note
KOLON Volunteer Groups Activities	Total Number of Activities Times	Times	283	86	60	
	Total Number of Active People	Persons	2,423	973	601	
	Total Activities Hours	Hours	9,111	3,231	2,312	

#### Win-win growth

Category	Unit	2019	2020	2021	Note
Grade of the Win-Win Growth Evaluation	Grade	Satisfactory	Satisfactory	Satisfactory	

#### Safety Investment

Category		Unit	2019	2020	2021	Note
Safety Investment	Target	KRW million	9,334	6,539	4,982	
	Performance	KRW million	5,407	3,568	3,082	
	Implementation rate	%	57.9	54.6	61.9	

#### Status of Suppliers Pledging for Compliance with Human Rights and Ethics

Category		Unit	2019	2020	2021	Note
Key Suppliers		Suppliers	69	72	89	
Amount of Suppliers Pledging among Key Suppliers		Suppliers	11	21	31	
Ratio of Suppliers Pledging among Key Suppliers		%	15.9	29.2	34.8	
Contracts among Key Suppliers that Included Provisions on the Environment and Human Rights	Amount	Suppliers	11	21	31	
	Ratio	%	40.7	29.2	34.8	

#### Results of Supplier CSR Audit

Category	Unit	2019	2020	2021	Note
Suppliers Newly Registered to 1st-Tier Suppliers	%	16.3	20.7	18.7	
No. of Suppliers Having Received Recommendation for Improvement after the CSR Audit	Suppliers	0	0	0	
No. of Suppliers Suspended after the CSR Audit	Suppliers	0	0	0	
No. of Suppliers Suspended Temporarily or Permanently	Suppliers	0	0	0	
Actual and potential negative social impacts in the supply chain and actions taken	Case	0	0	0	



# Governance

Kolon Industries

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# Operating Status of the Board of Directors

Category		Unit	2019	2020	2021	Note
Board of Directors convened	Regular Board Of Directors	Times	4	4	4	
	Extraordinary	Times	10	6	9	
	Total Board of Directors convened	Times	14	10	13	
Agendas deliberated or reported	Agendas	Case	31	26	42	
	ESG Agendas	Times	1	2	3	

# Board of Directors Composition and Attendance Rate

Category		Unit	2019	2020	2021	Note
Outside Directors	Outside Directors	Persons	4	4	4	
	Attendance Rate	%	100	100	100	
Inside Directors	Inside Directors	Persons	3	3	3	
	Attendance Rate	%	100	100	100	
Female Directors ratio	Female Directors	Persons	0	0	0	
	Total Directors	Persons	7	7	7	
	Female Directors ratio	%	0	0	0	

#### Status of Internal Audit/Assessment Regarding Ethics

Category		Unit	2019	2020	2021	Note
Ratio of Business Sites Undergoing Internal Audit Regarding Ethics	Ratio of Business Sites Undergoing Internal Audit Regarding Ethics	%	27.8	22.2	33.3	
	Amount of Business Sites Undergoing Internal Audit Regarding Ethics	Site	5	4	6	

FACTBOOK

# Anti-Corruption Management System(ISO37001)

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Category		Unit	2019	2020	2021 Note	
Anti-Corruption Management System(ISO37001)	Domestic sites	Site	0	1	9	
	Overseas Sites	Site	0	0	0	
	Ratio	%	0	6.7	50	

#### Response to Corruption and Violation by Stakeholders

Category	Unit	2019	2020	2021	No
customer Report	Case	0	0	0	
Consultation	Case	0	0	0	
Complaint	Case	1	2	2	
Disciplinary Action	Case	0	0	0	
Suppliers Report	Case	0	2	2	
Consultation	Case	0	0	0	
Complaint	Case	0	0	0	
Disciplinary Action	Case	0	0	0	
Employees Report	Case	1	3	4	
Consultation	Case	1	0	0	
Complaint	Case	0	0	0	
Disciplinary Action	Case	0	2	3	
Total Report	Case	1	5	6	
Consultation	Case	1	0	0	
Complaint	Case	1	2	2	
Disciplinary Action	Case	0	2	3	

#### Employees' Pledging for Compliance with Code of Ethics

Category		Unit	2019	2020	2021	Note
Employees' Pledging for Compliance with Code of Ethics ratio	Domestic	%	100	100	100	
	Overseas	%	52.6	86.6	95.7	

# Anti-Corruption Management System(ISO37001)

Kolon Industries

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Category		Unit	2019	2020	2021	Note
Bribery-taking/Embezzlement/Malfeasance Case Reported		Case	0	0	0	
	Investigations Conducted	Case	1	0	0	
	Disciplinary Actions Take	Case	1	0	0	
Violation of Approval Regulation	Case Reported	Case	0	0	0	
	Investigations Conducted	Case	0	1	0	
	Disciplinary Actions Take	Case	0	1	0	
Violation of Environment/Safety Accident	Case Reported	Case	0	0	0	
	Investigations Conducted	Case	3	0	0	
	Disciplinary Actions Take	Case	3	0	0	
Hindrance to Harmony Including Sexual Harassment/ Office Bullying	Case Reported	Case	0	0	0	Both cases were disciplined for two cases of reporting and investigation due to sexual harassment/ workplace
	Investigations Conducted	Case	0	2	2	harassment, etc
	Disciplinary Actions Take	Case	0	2	2	
Others	Case Reported	Case	0	0	0	
	Investigations Conducted	Case	6	14	13	
	Disciplinary Actions Take	Case	6	14	13	



# GLOBAL INITIATIVE REPORT

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Since joining the UN Global Compact in 2018, KOLON INDUSTRIES has actively reflected the ten principles in the four areas — human rights, labor, environment, and anti-corruption — across our overall management.

nts
Businesses should support and respect the protection of internationally proclaimed human rights.
Businesses should make sure that they are not complicit in human rights abuses
Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
Businesses should uphold the elimination of all forms of forced and compulsory labour.
Businesses should uphold the effective abolition of child labour.

#### Environment

Principle 7. Businesses should support a precautionary approach to environmental challenges.

Principle 8 Businesses should undertake initiatives to promote greater environmental responsibility.

Principle 9 Businesses should encourage the development and diffusion of environmentally friendly technologies

#### Anti-Corruption

Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery.

# **RESPONSIBLE CARE**

As a comprehensive global environmental, safety and health initiative implemented by the global chemical industry, Responsible Care leads the improvement of sustainability throughout the entire product life cycle, from development, manufacturing, sales, distribution, use to disposal of chemical products. As a member of Responsible Care, KOLON INDUSTRIES will continue to practice sustainability management in accordance with the basic policy below and strive to create social values.

#### Responsible Care Global Chart

- 1 Designating Responsible Care as one of our management goals, and ensuring all members of the company to participate in the action program.
- 2 Safeguarding the environment, safety, and health first and making efforts to minimize risks that can possibly arise in the process from production, transport, usage, and disposal.
- 3 Actively communicating with and responding to interests in regard to the environment, safety, and health of company members, customers, local communities, and related organizations.
- 4 Inducing safe use, transport, and disposal by thoroughly consulting and providing appropriate information on risks of chemical products for customers.
- 5 Cooperating with government agencies or experts for research and development or troubleshooting in relation to the environment, safety, and health.
- 6 Actively exchanging information on the environment, safety, and health with the international chemical industry while joining necessary global actions.
- 7 Establishing collaborative companies for sharing knowledge and experiences regarding the environment, safety, and health to facilitate Responsible Care activities.

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**SASB** 

As a non-profit organization that develops non-financial reporting standards, the Sustainability Accounting Standard Board (SASB) recommends the company to communicate with investors and stakeholders by disclosing industry-specific sustainability risk index. KOLON INDUSTRIES reports non-financial index of the chemical industry.

Category	Code	Index	Description	Report Page
GHG Emissions	RT-CH-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Aiming to achieve "2040 Net Zero for a Sustainable Future," an environmental management vision, KOLON INDUSTRIES is conducting various environmental management activities to strengthen its status as a global eco-friendly company, based on its carbon-neutral roadmap including an environmental management agenda by 2047. In addition, we are preparing to declare Science Based Target initiative (SBTi) and global Net Zero in 2047.	46
Air Quality	RT-CH-120a.1	NOx emissions	NOx emissions in 2021 are 7.62 tons.	79
		SOx emissions	SOx emissions in 2021 are 0.23 tons.	
Energy and Raw Materials	RT-CH-130a.1	Total energy consumed	Total energy consumption in 2021 are 11,775 TJ.	78
		Percentage of renewable energy used	The percentage of renewable energy use in 2021 is 0.015%.	
		Total self-generated energy	The self-generated energy in 2021 is 506,079 kWh. (Renewable energy-solar power generation)	
Water Resources	RT-CH-140a.2 RT-CH-140a.3	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	In 2021, zero incident of 1 compliance with legal regulations and sanctions occurred.	81
		Description of water management risks and discussion of strategies and practices to mitigate those risks	All our business activities and products are under the influence of regulations on water quality management and bad odor management, which stipulate the responsibilities and procedures for the prevention of water quality contamination and odor occurrence. KOLON INDUSTRIES has set clear pollution measurement criteria, and if the pollution level exceeds the permissible level, it is required to identify the causes and take necessary measures.	48
Hazardous Chemicals Management	RT-CH-150a.1	Amount of hazardous waste generated and percentage of the recycled	The amount of hazardous waste generated in 2021 is 28,121 tons, of which 91.6% was recycled with the amount of 25,550 tons.	80
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	KOLON INDUSTRIES has developed a communication process to provide accurate information on products and chemicals for the protection of customers' safety. When selling products, we provide Material Safety Data Sheets (MSDS) to customers and appropriate information on the entire product life cycle including transportation, use and disposal. In addition, the communication process allows customers or other stakeholders to ask questions about product safety at any time and provides timely answers. Besides, we have also stipulated a procedure to gather feedback from internal and external stakeholders on safety and health and respond to them in the "Communication Management Regulations."	49
Workforce Health & Safety	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	KOLON INDUSTRIES conducts regular risk assessments to understand the operational status of safety management for each business site and to preemptively prevent accidents. When implementing a new business or relocating a business site, additional irregular risk assessments are conducted to identify and respond to safety and health risks at the site in advance. During risk assessment, we identify hazards and risks in buildings, machinery, facilities, raw materials, and the associated processes; evaluate possibility and severity of an injury and a disease; and develop countermeasures.	52~55
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.2	Discussion of strategy to manage chemicals of concern	To preserve a clean and healthy global environment, all chemical substances handled are thoroughly managed using an IT-based database system. When new chemicals are used, the use of hazardous chemicals is minimized as much as possible by the EHS team at the work site and the Environmental Management Team at the headquarters that double check in accordance with the "Chemical Substance Preliminary Review Manual." Even when the use of hazardous chemicals is unavoidable, it is only used to the extent that the intended purpose is served.	54
		Development of alternatives with reduced human and/or environmental impact	KOLON INDUSTRIES is pioneering the eco-friendly material market by developing recycled plastic film for the first time in Korea. By developing packaging materials using recycled PET, we succeeded in developing post-consumer recycled (PCR) PET film for the first time in Korea.	41~42
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	With an objective of actively complying with environmental and social governmental regulations, we always check the establishment or revisions of relevant domestic and foreign laws and regulations as well as international agreements following our "Regulation for Management of Environment Safety Law" and promptly reflect them in the internal policies. In addition, we are actively participating in and cooperating with newly proposed policies.	27~28

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TCFD is an initiative created by the Financial Stability Board (FSB) to help companies disclose climate-related information. The FSB consists of G20 finance ministers and central bank governors. TCFD information is utilized in making decisions related to climate change. KOLON INDUSTRIES discloses activities related to climate change in accordance with TCFD recommendations, and such information can be found in our responses to CDP climate change questionnaire.

Горіс	TCFD Recommendation	CDP Climate Change
Governance	a) Describe the board's oversight of climate-related risks and opportunities	CDP, CC1.1a, CC1.1b.
	b) Describe management's role in assessing and managing climate-related risks and opportunities	CDP, CC1.2a
Strategy	a) Describe the climate-related risks and opportunities the organization has over the short, medium, and long term	CDP, CC2.2c, CC2.3a, CC2.4a, CC3.1c
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	CDP, CC2.5, CC2.6
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	CDP, CC3.1c, CC3.1d
isk Management	a) Describe the organization's processes for identifying and assessing climate-related risks	CDP, CC1.2a, CC2.2b
	b) Describe the organization's processes for managing climate-related risks	CDP, CC2.2d
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	CDP, CC2.2
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	CDP, CC11.3
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	CDP. C5.1, C6.1, C6.3, C6.5
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	CDP, C4

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The UN Sustainable Development Goals (SDGs) are the UN's global mid-to-long-term development plans that are implemented with 17 goals to solve global economic, environmental and social problems by 2030. KOLON INDUSTRIES actively supports the UN Sustainable Development Goals for a better planet, and is making various efforts to support the achievement of 17 goals and 169 detailed goals.

Focal Implementation Goal	UN SDGs		Report Page
Goal.1 Io Poverty	1 <sup>別</sup> श्रिकार <b>市</b> 省中市市	Supporting children outside of school who come from poor household circumstances through "SUE COMMA YOU" campaign  Helping international refugees by delivering a number of items to overseas refugee camps and holding cultural events  Giving Support Packages containing hygiene products and psychotherapeutic items with donations from employees to children in vulnerable class	69~73
Goal.3 Good Health And Well-Being	3 GOOD HEALTH AND WITH SEPRE	Donating entire proceeds from the sales of signature products in Archivépke to young patients who cannot afford to get treatment or surgery due to poverty  Producing filters, the core material of masks and supplying them to mask manufacturers for free in order to prevent the spread of COVID-19, and conducting a blood donation campaign at the company level as the need for blood was on the increase due to COVID-19	59~60, 69~73
Goal.4 Quality Education	4 COLUMN	<ul> <li>Supporting to growing children who are in the blind spot of care due to the shutdown of local children's centers due to the COVID-19 outbreak through the "Add, Multiply and Divide" campaign</li> <li>Operating a visiting energy school where children can directly experience the principles of eco-friendly energy through KOLON Group's "Visiting Eco Long Long"</li> <li>Developing support projects for nurturing young talents through the KOLON Group scholarship program</li> <li>Invite students to the company and conduct a 'one company and one school' program to cooperate with the local community</li> </ul>	69~73
Goal.8 Decent Work And Economic Growth	8 ECCONT MORE AND ECCONOMIC CHAPMENT	· Hiring single moms as upcycling workshop instructors to help them stand on their own through the brand, RE;CODE · Giving out Onnuri gift certificates instead of annual presents to employees on the foundation day in order to lend support to local communities and small business owners suffering from COVID-19	69~73
Goal.11 Gustainable Cities And Communities	11 SECONDARIA CITES  ABBE	· Promoting 'SERIES; Warm Heart Campaign' to support marginalized culture and arts industries by selling collaboration products with artists · Operation of 'Dream Partners Week' in which employees participate intensively in volunteer activities for a certain period of time	69~73
Goal.12 Responsible Consumption And Production	12 occupation occupation on the projection occupation o	· Pursuing sustainable consumption and production through CSR assessment on suppliers, distributing Responsible Business Alliance, and managing conflict minerals · Operating the upcycling brand RE;CODE that creates sustainable fashion value	14~17, 66~68
Goal.13 Climate Action	13 GAMAGE APPEN	<ul> <li>Creating "RE;CODE," the first upcycling brand in the industry and operating "weDO," the platform for sustainability-seeking brands</li> <li>Establishing a carbon-neutral roadmap including an environmental management agenda by 2047 and conducting carbon reduction activities with the goal of Achieving 2040 Net Zero for a Sustainable Future</li> <li>Achieving 82.35% in terms of the ratio of domestic and overseas business sites obtaining ISO 14001 certification for environmental management</li> <li>Developing materials to contribute to the era of eco-friendly hydrogen economy and electric vehicles while continuously working on restructuring toward a zero-carbon business</li> <li>Selling COURONNE eco-bags 100% made of yarn extracted from plastic PET bottles</li> <li>Gradually transforming KOLON Sports stores to eco-friendly ones by making hangers with corn starch extract and reusing mannequins colored with eco-friendly paints</li> </ul>	13, 39~43, 46, 69~73
Goal.14 Life Below Water Goal.15 Life On Land	14 UPE HELOW NATURE 15 UPE ON LAND	· 'Protecting endangered animals and plants in Korea through "Noah Project"; Campaign to preserve honeybees and eagles in 2016, Halla Somdari Flower in 2017, hippocampus in 2018, butterflies in 2019, pine trees in 2020, Cotoneaster wilsonii in 2021, and seals in 2022 were be held  · The brand "epigram" creates clothing with graphic or artwork images of animals and plants, and launches a campaign for endangered animals and plants that introduces clothing and products with reusable and eco-friendly materials to the store, As of now, the theme of "Blue Sea Turtle, Euplexaura, Sesarmops intermedius, and Neophocaena phocaenoides" has been held under the theme of "Korea's extinct animals (gray wolves, damsels, otters, tigers, musk deer, and Asiatic black bears) during the 22SS season	69~73

# APPENDICIES

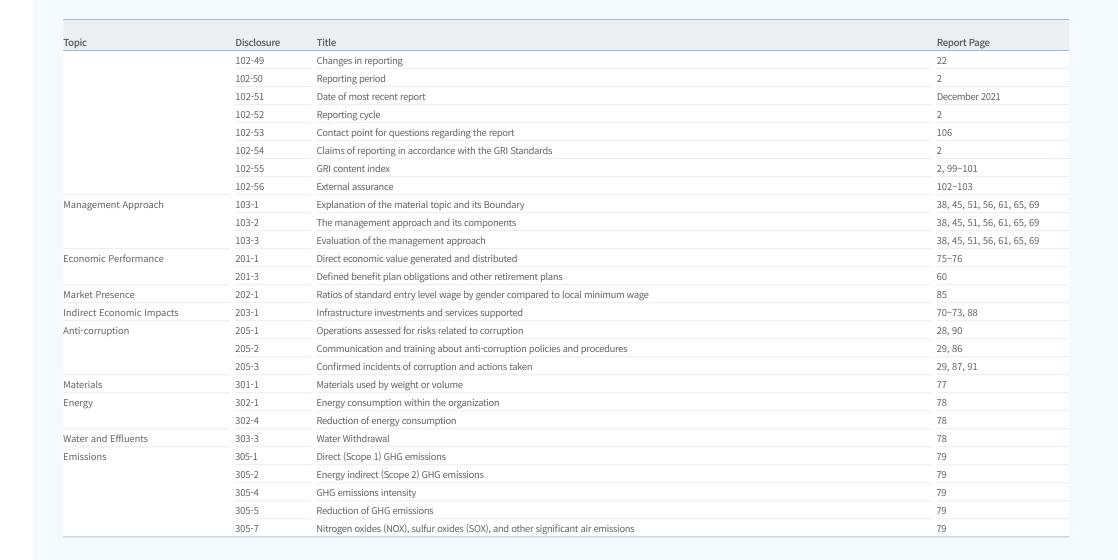
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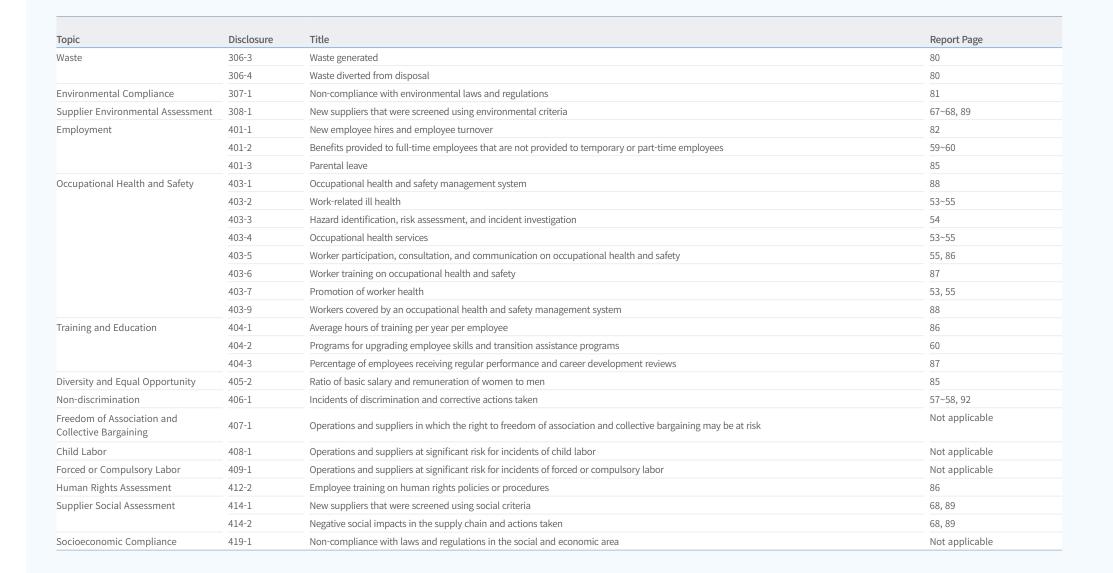


Торіс	Disclosure	Title	Report Page
General Disclosures	102-1	Name of the organization	6
	102-2	Activities, brands, products, and services	8~11
	102-3	Location of headquarters	6
	102-4	Location of operations	7
	102-5	Ownership and legal form	6
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	102-8	Information on employees and other workers	82~83
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	102-45	Entities included in the consolidated financial statements	6, 75
	102-46	Defining report content and topic Boundaries	22
	102-47	List of material topics	22
	102-48	Restatements of information	Some data changes due to th decision to suspend the fabri business of KOLON Materials (2021.04)











# **Independent Assurance Statement**

# To: The Stakeholders of KOLON INDUSTRIES, INC

#### Introduction and objectives of work

Kolon Industries 2021 Sustainability Report

BSI Group Korea (hereinafter "the Assurer") was asked to verify KOLON INDUSTRIES Sustainability report (hereinafter "the Report"). This assurance statement applies only to the relevant information contained in the scope of the assurance. KOLON INDUSTRIES is solely responsible for all information and assertion contained in the report.

The responsibility of the assurance is to provide independent assurance statement with expert opinions to KOLON INDUSTRIES by applying the verification methodology and to provide this information to all stakeholders of KOLONINDUSTRIES.

#### **Assurance Standards and Levels**

This assurance was based on the AA1000AS v3 (2020) Assurance Standard and confirmed that the report was prepared in accordance with the Core Option of GRI Standards, the international standards guidelines of sustainability reports. The assurance level was based on the Type 1 that confirmed compliance with the four principles of AA1000 AP (2018) in accordance with the AA1000 AS.

#### Scope of Assurance

The scope of assurance applied to this report is as follows;

- Based on the period from January 1st to December 31st 2021 included in the report, some data included first half of 2022.
- Major assertion included in the report such as sustainability management policies, strategies, objectives, business and performance
- Information related to material issues determined as a result of materiality assessment
- Appropriateness and consistency of processes and systems for data collection, analysis and review

The following contents were not included in the scope of assurance.

- Financial information
- Disclosures in the international standards and initiatives index excluding GRI
- Other related additional information such as the website presented in the report

#### Methodology

As part of its independent assurance, the assurer has used the methodology developed to collect relevant evidence to comply with the verification criteria and to reduce errors in the reporting, and has performed the following activities;

- To determine verification priorities, review of materiality issue analysis process and verification of the results
- System review for sustainability strategy process and implementation
- Review the evidence to support the material issues through interviews with senior managers with responsibility for them
- Verification of data generation, collection and reporting for each performance index

#### **Assurance Opinion**

On the basis of our methodology and the activities described above, it is our opinion that

- -The information and data included in the report are accurate and reliable and the assurer cannot point out any substantial aspects of material with mistake or misstatement.
- -The report was prepared according to the Core option of the GRI Standards.
- -The assurance opinion on the four principles presented by the AA1000 AP (2018) is as follows.

#### AA1000 AP (2018)

· Inclusivity: Stakeholder Engagement and Opinion

KOLON INDUSTRIES defined customers, shareholder & investors, government & media, association, NGO & local communities and partners as key stakeholder groups, and operates communication channels for each group for stakeholder engagement. They conducted a survey on internal and external stakeholders and collected various opinions and expectations of stakeholders based on the response results, and reflect the derived material issues in decision-making on sustainability management.

· Materiality: Identification and reporting of material sustainability topics

KOLON INDUSTRIES derived the issue pool of 28 topics through the risk assessment process and communication with stakeholders, based on a the results of media research, benchmarking global advanced companies, analysis of major global initiatives related to sustainability, and opinions collected from communication channels of each stakeholder group. They conducted a materiality assessment that comprehensively consi

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KOLON INDUSTRIES establishes and implements a response plan for each issue to appropriately respond to the derived each issue that reflects the expectations of stakeholders, and discloses detailed response activities and performance for them through the report.

·Impact: Impact of an organization's activities and material sustainability topics on the organization and stakeholders

KOLON INDUSTRIES implemented the process to identify and evaluate the impact on organizations and stakeholders related to management issues. They make decisions on operations and management of impacts that could arise from each management issue by identifying and assessing the impacts, risks and opportunities regarding selected management issues. The results of impact, risk, and opportunity factors analysis on material issues are used for decision-making to respond to each issue, and the process is disclosed in the sustainability report.

#### Key areas for ongoing development

- KOLON INDUSTRIES published its sustainability report, including the performance and planning of the manufacture sector like chemical and non-manufacture sector like fashion. It may be helpful upgrade the sustainability management to consider the characteristics of each sector, specific achievements and plans related to sustainability in the environment and social sectors of the manufacture sector.
- Each section of the report describes the positive aspects and expresses efforts to further develop them. However, at the same time, identifying issues with poor performance and specifying specific plans and mid-to/long term plans/goals for resolving them will help improve the balance of reporting.

#### Statement of independence and competence

The assurer is an independent professional institution that specializes in quality, health, safety, social and environmental management with almost 120 years history in providing independent assurance services. No member of the assurance team has a business relationship with KOLON INDUSTRIES. The assurer has conducted this verification independently, and there has been no conflict of interest. All assurers who participated in the assurance have qualifications as AA1000AS assurer, have a lot of assurance experience, and understand the BSI Group's assurance standard methodology.

#### Evaluation against GRI 'In Accordance' Criteria

The assurer confirmed that this report was prepared in accordance with the GRI Standards Core Option and the disclosures related to the following Universal Standards and Topic-specific Standards Indicators based on the data provided by KOLON INDUSTRIES.

#### [Universal Standards]

Organizational Profile 102-1~13/ Strategy 102-14/ Ethics and Integrity 102-16~17/ Governance 102-18/ Stakeholder Engagement 102-40~44/ Reporting practice 102-45~56/ Management Approach 103-1~3

#### [Topic-specific Standards]

- Economic: 201-1, 201-3, 202-1, 203-1, 205-1~3
- Environmental: 301-1, 302-1, 302-4, 303-3, 303-4, 305-1, 305-2, 305-4, 305-5, 305-7, 306-3, 306-4, 307-1, 308-1
- Social: 401-1~3, 403-1~7, 403-9, 404-1~3, 405-2, 406-1, 407-1, 408-1, 409-1, 412-2, 414-1~2, 419-1

CEO of BSI Group Korea Im Seong-hwan





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NO	Name of Organizations	Communication Channel	Year Joined
1	Korea Enterprises Federation		1990
	·	Management Planning Team	1997
2	Korea Chamber of Commerce and Industry	Management Team	
3	IMI International Management Institute	WLB Team	1990
4	ASIA BUSINESS COUNCIL	WLB Team	1990
5	Federation of Korean Industries	Management Planning Team	1990
6	Korea Economic Research Institute	Management Planning Team	1990
7	Korea International Trade Association	WLB Team	1990
8	Korea Packaging Association	Film Business Division 3	1993
9	Korea Industrial Technology Association	Technology Division	1993
10	Korea AEO Association	ESG Management team	2011
11	Korea Chemicals Management Association	EHS Management team	1997
12	International Association of Phenol and Resin	Industrial Resin Business Division 1	2007
13	Korea Petrochemical Industry Association	WLB Team	1977
14	Korea Management Association	WLB Team	2007
15	Korea Productivity Center	WLB Team	2007
16	Korea Amateur Business Archery Federation	Archery Team	2012
17	Korean Geosynthetics Society	Planning Division 4	2009
18	Fair Competition Federation	Legal/Compliance Team	2013
19	Korea Exchange	Environmental Management team	2016
20	Korea P.E.T. Film Industry Council	Business Division 3	2013
21	Korea Personal Improvement Association	WICANDO	2013
22	Korea PCB & Electronics Packaging and Circuit Association (KPCA)	Image Material	2013
23	UN Global Compact Korea Association	ESG Management team	2018
24	Korea Responsible Care Council	Environmental Management team	2018
25	Climate Change Center	Environmental Management team	2021
26	World Plastic council	Future Technology Institute	2019
27	Korea Industrial Safety Association	EHS Team	1984



Award	Awarded Date	Name of Award Institution	Name of Award Institution
Selected as Eco-Friendly Business Sites	2022. 01.	Gangseo-gu, Seoul	KOLON INDUSTRIES
2021 Korea Energy Award	2021. 11.	Korea Energy Agency, Ministry of Trade, Industry and Energy	Daesan Plant
The 1st MoneyToday Hydrogen Excellence	2021. 07.	MoneyToday	KOLON INDUSTRIES
Citation (Thorough management of environmental pollutant emitting facilities)	2019. 12.	Gyeongsangbuk-do	KOLON INDUSTRIES
Excellent business site for leading resources circulation	2019. 09	Prime Minister's Citation	Ulsan Plant
Citation (Fully complied with the waste reduction scheme)	2018. 05.	Korea Environment Corporation	Gimcheon Plant 2
The 30th Korea Labor-Management Cooperation Excellence Award	2018. 02.	Korea Enterprises Federation	KOLON INDUSTRIES
Energy Champion	2017. 11.	Korea Energy Agency	Gimcheon Plant 1
Citation (Contribution to the region's environmental preservation)	2017. 06.	Daegu Regional Environmental Agency	Gimcheon Plant 2
Ulsan Chamber of Commerce and Industry Excellence	2017. 03.	Ulsan Chamber of Commerce and Industry	Ulsan Plant
President Citation in Korea Safety Award	2016. 11.	Ministry of Public Safety and Security	Ulsan Plant
Excellence in health promotion activities	2014. 12.	Korea Occupational Safety and Health Agency	Ulsan Plant
Excellence citation for one-enterprise-one-river cleaning service	2014. 12.	Ulsan Nam-gu Office	Ulsan Plant
Site with safety zone certification	2013. 12.	Korea Safety Zone Certification Institute	Ulsan Plant
Security and Public Administration Minister's Award in Korea Safety Award	2013. 11.	Ministry of Security and Public Administration	Ulsan Plant



Kolon Industries 2021 Sustainability Report



Issue

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