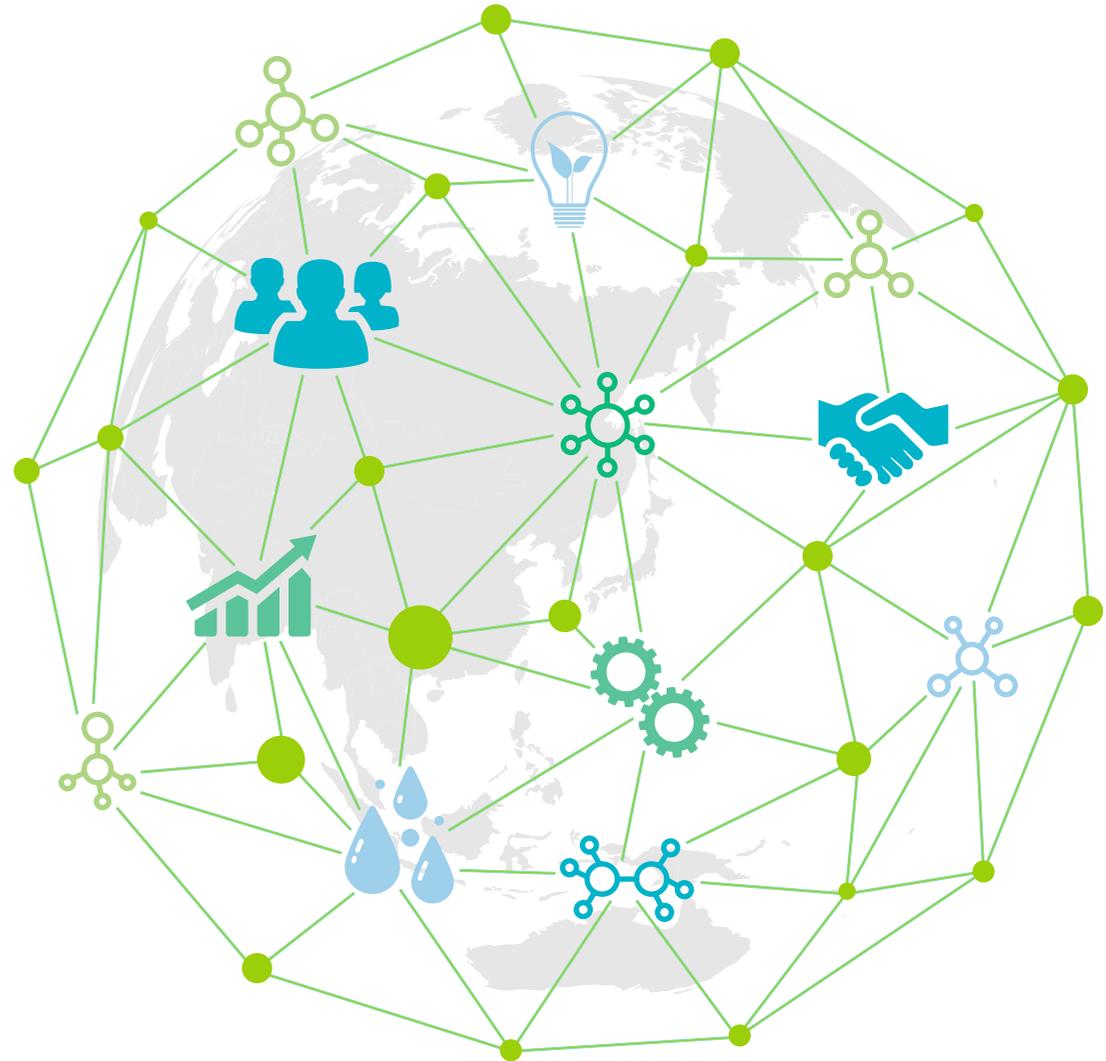


2021 SUSTAINABILITY REPORT

SK materials SUSTAINABILITY REPORT 2021



ABOUT THIS REPORT

Report Overview

This report is the first Sustainability Report of SK materials and includes its performance and plans related to ESG (Environment, Social, and Governance). This allows SK materials to communicate transparently with its various stakeholders, and SK materials will continue to share its progress of sustainable development and strengthen trust with various stakeholders through publishing the Sustainability Report every year.

Reporting Standard

- GRI (Global Reporting Initiative) Standards Core Option
- SASB (Sustainability Accounting Standards Board), Resource Transformation Sector, Chemicals Sustainability Accounting Standard
- TCFD (Task Force on Climate-related Financial Disclosures) Recommendations
- UNGC (UN Global Compact) 10 Principles

Reporting Period

1st of Jan. 2020 to 31st of Dec. 2020

* For some major performance items, the report contains data up to June 2021.

** In the area of quantitative performance, the report contains data over the three most recent fiscal years (January 2018 – December 2020) to present their time-series trajectory.

Reporting Scope

The scope of this report includes overall economic, social, and environmental data of SK materials head office and worksite at Yeongju-si, Seoul office, and Sejong-si Institute on a separate basis in accordance with the K-IFRS.

* Some data were prepared on a consolidated basis. These were annotated separately for the convenience of readers.

Assurance

This report was assured by the Korea Management Registrar (KMR), an independent external verification agency, to ensure the objectivity and transparency of its preparation. (Independent Assurance Statement, p.77~78)

Material Changes in Organization and Supply Chain

SK materials Performance Co., Ltd. and SK materials JNC Co., Ltd. were newly established as consolidated companies of SK materials. As a result of this business expansion, the scope of SK materials' supply chain for raw and subsidiary materials, packaging materials, equipment, construction, and services has been expanded in the related business areas.

Company Name	Date of Establishment	Location	Major business
SK materials performance Co., Ltd.	10 th of Feb. 2020	Sejong-si	Manufacturing and sale of photoresist (PR) material
SK materials JNC Co., Ltd.	28 th of Dec. 2020	Hwaseong-si	Manufacturing and sale of OLED material

Month Issued: June 2021

Contact: Tel. 02-728-0910 Fax. 02-728-0998

Issuer: ESG Management Team, SK materials

Website: www.sk-materials.com

Location: 22nd floor, Gran Seoul Tower 1 Jong-ro 33, Jongro-gu, Seoul

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Message from the CEO



Dear Esteemed Stakeholders,

Despite the difficult internal and external conditions caused by COVID-19, I always appreciate and anticipate your support for SK materials, and sincerely wish for your health and well-being

SK materials is working actively to prevent the spread of the disease to our employees, their families, and suppliers through a thorough quarantine system and the Business Continuity Plan (BCP) during the COVID-19 crisis. We have been able to conduct business normally, without having any significant impact from COVID-19. We are also continuing to carry out the activities to overcome the crisis by sharing pain with communities suffering from COVID-19.

SK materials is striving to create a differentiated level of competitiveness based on securing global-level technological capabilities in response to rapidly changing market conditions and fierce market competition. In addition, we have been seeking for the sustainable happiness of our stakeholders through 'DBL (Double Bottom Line)' management, SK's management philosophy of pursuing both economic and social values. In the first Sustainability Report of the company published this year, I would like to share the achievements of SK materials so far.

Since its incorporation into the SK Group five years ago in 2016, SK materials has more than tripled its corporate value through the aggressive expansion of our product portfolio. As of 2020, it has grown from a semiconductor cleaning gas company that supplied six products to a total semiconductor material company that deals with sixty-nine products.

As such, SK materials achieved the highest level of performance in 2020 with the creation of KRW 520.1 billion and KRW 117.6 billion of economic and social values accordingly, and is expanding into new growth areas such as next-generation displays and batteries based on the capabilities it has accumulated in semiconductor materials. SK materials will once again leap forward as a 'High Value Material Technology Company' that provides differentiated value to key stakeholders, including customers, society, and employees as well as investors.

In addition, SK materials is carrying out a range of activities to secure ESG competitiveness at the level of global standards. In terms of the Environment, SK materials is developing green products/services and building environment-friendly workplaces by joining RE100 to actively participate in responding to the climate change crisis. In terms of the social sector, SK materials is putting much effort on creating a safe and healthy workplace, manage a sustainable supply chain, and build harmonious relationships with the local community. Last but not least, in the Governance, SK materials is establishing a transparent and independent Board of Directors operating system and strengthening ethical management. Based on such activities, SK materials is contributing to the achievement of the UN Sustainable Development Goals (UN SDGs), and has joined the UN Global Compact (UNGC) to express its commitment to sustainability.

Sustainability is an ultimate goal that must be attained and a great opportunity to be sought for to achieve corporate growth. SK materials will continue to strive to pursue management activities based on its belief that sustainable growth is essential to the satisfaction of all stakeholders, beyond the company and society.

In this regard I cordially ask you, our esteemed and valued stakeholders, for your everlasting support.
Thank you.

CEO **Lee, Young Wook**

Company Overview

SK materials provides production, sales, and comprehensive service of key materials for the semiconductor, display, and solar cells. SK materials is the first company in Korea that produced a specialty gas, Nitrogen Trifluoride (NF₃), through research and development in 2001. Since then, SK materials has differentiated competitiveness in specialty gas industries such as Tungsten hexafluoride (WF₆), Monosilane (SiH₄), and Disilane (Si₂H₆). We have diversified our portfolio even more from industrial gases and precursors to etching gases and photoresist (PR) by expanding the business since the incorporation into the SK Group in 2016.

SK materials has excellent capabilities across the value chain from R&D to process designing, quality management, and SHE (Safety, Health, and Environment). Based on these competencies, we have secured relationships with our strategic customers and provided solutions that meet customers' needs.

General Status

Company Name

SK materials Co., Ltd.

Total Assets

KRW 11,124.5 billion

Date of Establishment

10th of Nov., 1982

Operating Profits

KRW 91.2 billion

President & CEO

Lee, Young Wook

Credit Rating

A+

No. of Employees

794

Sales

KRW 520.1 billion

Head Office

59-33 Gaheunggongdan-ro, Yeongju-si, Gyeongsangbuk-do 750-080 Korea

* As of December 31, 2020, Separate Financial Statements basis

Products

Cleaning Gas

SK materials produces and sells cleaning gas that removes unnecessary residues from facilities and wafers during the semiconductor and display manufacturing process.

Deposition Gas

SK materials manufactures and sells various deposition gases that are used in film-formation during the semiconductor, display panel, and solar cell manufacturing process, and diversifies its portfolio to promptly respond to change in trend of the IT industry.

Etching Gas

SK materials produces and sells etching gases, which are used to make the shape of a space in the semiconductor process. In order to achieve greater precision in cutting-edge devices, SK materials provides more advanced materials.

SK materials Worksite



[Note] Major Subsidiaries

SK materials airplus Inc.

Since its establishment in 2007, SK materials airplus has proactively responded to customer demands by supplying high-quality industrial gas. To become a leading company in the industrial gas market, SK materials airplus is expanding its semiconductor material business, which requires high purity and high reliability.

SK trichem Co., Ltd.

SK trichem was established in 2016 as a joint venture with a Japanese business partner and is currently developing manufactures and selling precursors which are the key materials in the semiconductor deposition process. SK trichem is growing as a highly competitive global company by supplying its products to various domestic and overseas semiconductor chip manufacturers.

SK showa denko Co., Ltd.

Established in 2017, SK showa denko produces and sells semiconductor etching gas, for which South Korean had previously relied on imports, through the introduction of new technology. SK showa denko has domestic and overseas global semiconductor manufacturing companies as its major customers. It is putting much effort on developing various high-value semiconductor materials.

SK materials renewtech Co., Ltd.

SK materials renewtech provides green value by collecting and refining CO₂ produced during the production of blue hydrogen in petrochemical plants and reuses it in semiconductor cleaning, food and beverage, and dry ice production.

SK materials performance Co., Ltd.

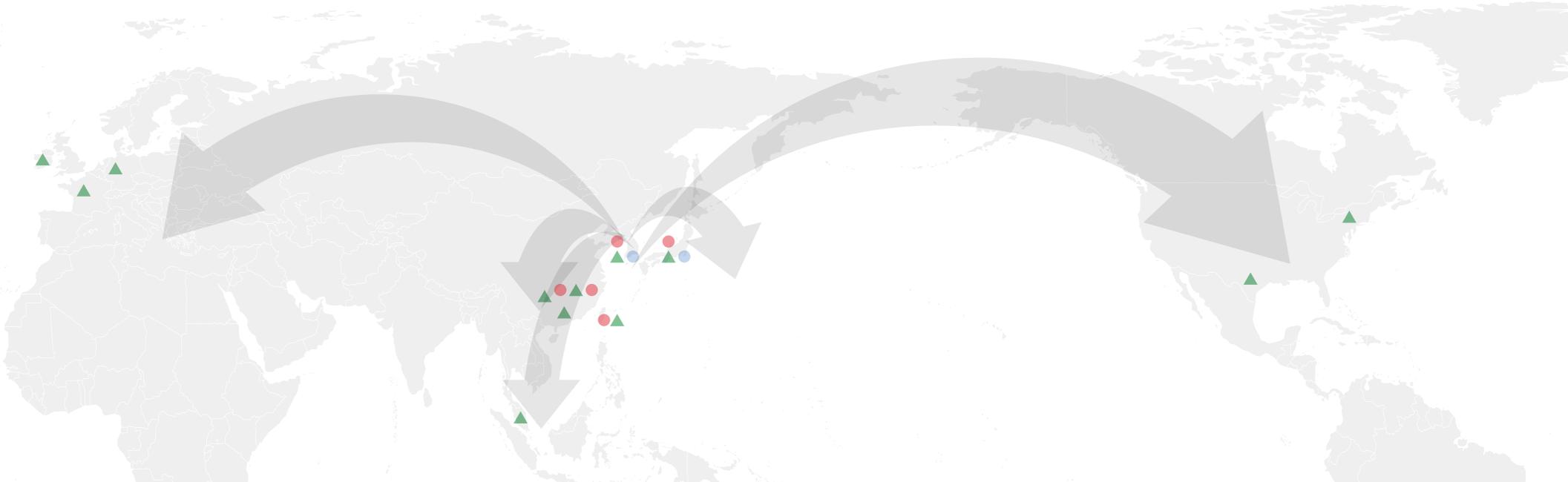
Established in 2020, SK materials performance provides photoresist and related functional materials used in the lithography process during semiconductor manufacturing, committed to meet the customers' needs.

SK materials JNC Co., Ltd.

SK materials JNC was established in 2020 to lead the OLED material market by combining SK materials' production and marketing capabilities with JNC's technology. It is pioneering the next-generation display market by diversifying its product portfolio.

Global Network

SK materials has been expanding its business worldwide: we have global sites in China, Japan, and Taiwan. We operate a production plant that produces 1,500 tons of NF₃ per year in Jiangsu Province, China, and a total of four sales corporations in China, Japan, and Taiwan.



● Domestic Worksites and Subsidiaries

Classification	Worksite/Subsidiary Name	Location
Domestic Worksites	SK materials	Yeongju-si (Head office/Plant)
		Seoul (Office)
		Sejong-si, Hwaseong-si (R&D Center)
Subsidiaries	SK materials airplus Inc.	Ulsan-si, Cheongju-si, Icheon-si
	SK trichem Co., Ltd.	Sejong-si
	SK showa denko Co., Ltd.	Yeongju-si
	SK materials renewtech Co., Ltd.	Ulsan-si
	SK materials performance Co., Ltd.	Sejong-si, Asan-si
	SK materials JNC Co., Ltd.	Hwaseong-si, Pyeongtaek-si

● Overseas Worksites

Worksite Name	Location	Worksite Type
SK materials Japan Co., Ltd	Yokkaichi, Japan	Sales Corporation
SK materials Taiwan Co., Ltd	Taizhong, Taiwan	Sales Corporation
SK materials Jiangsu Co., Ltd	Jiangsu, China	Production Plant
SK materials Xian Co., Ltd	Xian, China	Sales Corporation
SK materials Shanghai Co., Ltd	Shanghai, China	Sales Corporation
SK JNC Japan Co., Ltd	Ishihara, Japan	JNC Research Institute

Global Network

▲ Global Customer Network

SK materials supplies high-quality and high-performance materials to a sum of 73 major global semiconductor and display companies. With an increase in demand for materials in global market, we are planning to expand our customer network.

Location	Industry	Number	Major customers
Korea	Semiconductor	12	Samsung Electronics, SK hynix, etc
	Display	3	Samsung Electronics, LG Display, etc
China	Semiconductor	8	Samsung Electronics, SK hynix, Intel, JHICC, etc
	Display	8	Samsung Electronics, LG Display, BOE, etc
Taiwan	Semiconductor	9	TSMC, UMC, Micron, etc
	Display	4	AUO, Innolux, etc
Japan	Semiconductor	11	KIOXIA, SONY, Micron, etc
	Display	7	Sharp, Japan Display, etc
Southeast Asia	Semiconductor	8	Global Foundries, SSMC, X-Fab, etc
USA/ Europe	Semiconductor	3	Samsung Electronics, Global Foundries, etc

● Global Cooperating Business Partner Network

SK materials is collaborating with global technology companies and engaging in various green technology and new materials development to innovate its business portfolio.

Company Name	Country	Company Information	Cooperation
Showa Denko K. K.	Japan	Japan's largest comprehensive chemical company; produces chemical products and industrial materials	Etching gas development
Tri Chemical Laboratories Inc.	Japan	R&D/manufacturing/sale of high purity chemical materials for semiconductors	Precursor development
JNC CORPORATION	Japan	Established in 1906, JNC is a comprehensive chemical company that supplies LCD displays, synthetic resins and fundamental chemicals while holding an original OLED technology for blue light-emitting layer	OLED material development
Korea Institute of Energy Research	Korea	Government-funded research institute that develops energy technology to respond to the crisis of climate change and contributes to policy establishment, with original technologies for collecting CO ₂	CCUS* business

* CCUS: Carbon Capture Utilization and Storage

Regional Sales

Based on these global networks, SK materials is providing high-quality products and services to domestic and foreign IT industry customers to play an active role as a leading global partner in the IT industry.

(Unit: KRW million, %)

Classification	Separate Financial Statements basis		Consolidated Financial Statements basis	
	Sales	Sales ratio	Sales	Sales ratio
Domestic	345,553	66.4	680,600	71.3
Asia	174,145	33.5	274,006	28.7
China	42,493	8.2	133,791	14.0
Taiwan	83,918	16.1	88,639	9.3
Japan	39,478	7.6	43,321	4.5
Other (USA and Europe, etc)	375	0.1	375	0.0
Total	520,073	100.0	954,981	100.0

* As of December 31, 2020

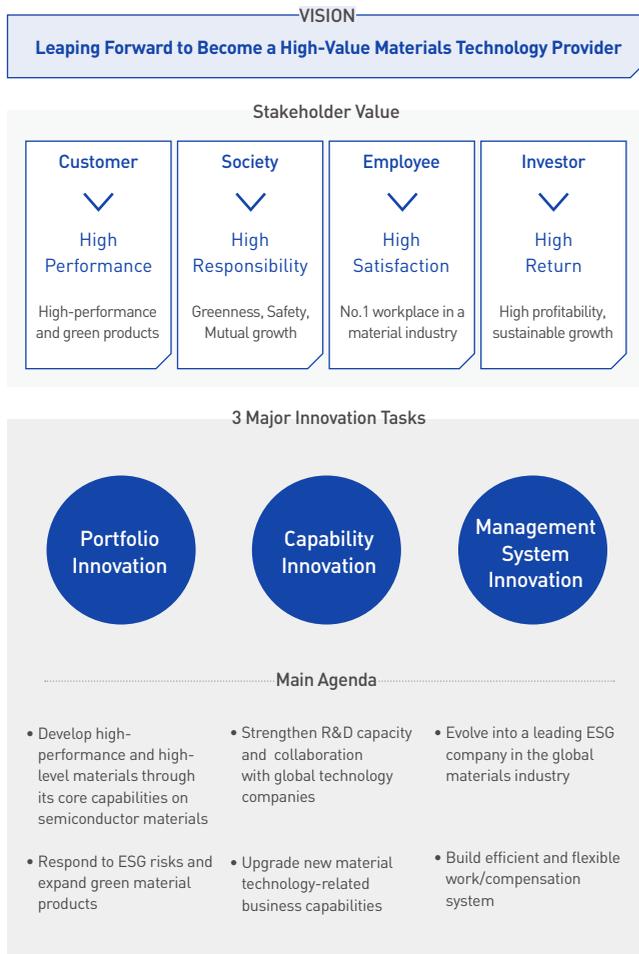
SUSTAINABILITY MANAGEMENT



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Sustainability Strategy

Sustainability Performance Management System



Since its incorporation into the SK Group in 2016, SK materials has developed from a semiconductor cleaning gas company to a total semiconductor material company through the active expansion of its product portfolio. In a fast-changing and diversifying management environment, SK materials has established 2021 Sustainable Strategy to create high-value for stakeholders and become a 'High Value Material Technology Company.'

Proactive Response to Changes in Value Paradigm

SK materials recognizes that a proactive response to changes in value paradigm that stakeholders demand is a starting point of becoming a High Value Material Technology Company. We have investors, customers, society, and employees as our four major stakeholders and established core values to provide respectively.

Investors - High Return

SK materials considers long-term growth and risk management perspective in expanding its investment portfolio for investors and believes that non-financial indicators such as the company's ESG performance are emerging as a major factor in investment decisions. SK materials aims to provide high return value to investors by securing its sustainability.

Customers - High Performance

More and more customers demand for higher quality and green products that can respond to market changes. As a semiconductor market based on new technologies such as 5G, AI, and autonomous vehicles is growing rapidly, the demand for high-quality semiconductor materials is also increasing. In addition, the global standard required by climate-related regulations is becoming strict, expanding the market for green products such as electric vehicles and batteries, and thus leading to an increase in expectation for the development of green materials. In this regard we aim to achieve high performance green products by reflecting these changes in customers' needs.

Society - High Responsibility

Society asks companies to create more diverse values such as reducing environmental impact, ensuring safety for local communities, and building cooperative relationships, rather than simply expanding their scale of investment and support. SK materials also recognizes that mutual growth with members of society, such as local communities and partners, is the foundation for the company's growth, thus carrying out various activities for mutual development. SK materials will continue to implement its High Responsibility to society in various areas such as environment, safety and etc.

Employees - High Satisfaction

As employees are core players in a High Value Material Technology Company, it is essential to motivate them to innovate the ways they work and to pursue happiness in their work process. SK materials aims to create an optimal work environment so that employees can meet their satisfaction level.

Three Key Innovation Challenges, Methodology to Achieve Goals

In order to become a High Value Material Technology Company, SK materials has identified three major innovation challenges as a methodology to create new value for stakeholders.

Portfolio Innovation

SK materials will promote 'Portfolio Innovation' to expand new areas of growth based on its core capabilities in the area of semiconductor materials. SK materials will develop and apply new technologies such as high performance and green technologies that can overcome the limitations of our existing materials, and expand its business area into a growing market. SK materials also identifies and prevents ESG risks in its portfolio, while econvertng business portfolio into green materials.

Capability Innovation

SK materials will internalize the core capabilities to become technical material company and empower its business competences. Through R&D and collaboration with global tech. corporations, it will secure its competences, and commercialize the results of R&D to enhance its global top-tier material operation capabilities. As a result, it seeks to empower the competitiveness of existing products and continuously develop new product to respond to customer's high demand in a timely manner.

Management System Innovation

Based on its global top level of environment, safety, co-existence with society and governance structure, SK materials seeks to become a global leading material company with ESG capabilities. SK materials will establish green and safe worksite, enhance the co-existence capability with society and suppliers, and operate independent board of directors that meet the global standards. In addition, SK materials will improve HR system to provide efficient and flexible work and compensation structure for the happiness of our employees.

Sustainability Strategy

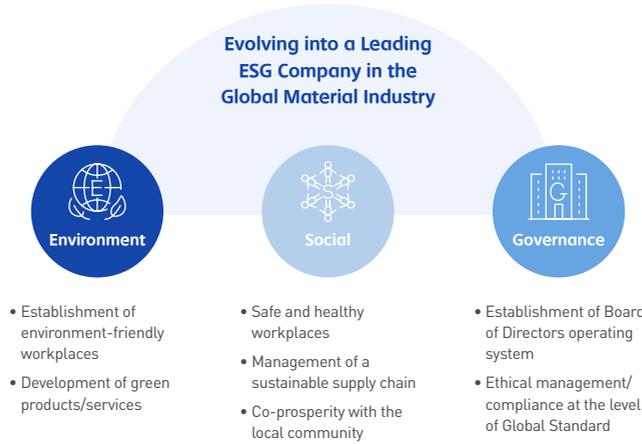
ESG Strategy

SK materials is evolving into a leading ESG company in the global materials industry.

In the environment sector, we are working with customers and suppliers to secure recycling technology for high purity materials and develop green materials, while focusing on building environment-friendly workplaces. In particular, we joined RE100, a first for a Korean company, in 2020, and are promoting the transition to renewable energy by introducing a green rate system from 2021. In addition, SK materials has established mid-to-long-term goals for major environmental areas such as water reduction and waste recycling. We will continue to reduce the environmental impact of our workplaces.

In the social sector, we will continue to innovate the ICT-based safety system to secure the safety of SK materials' employees and its suppliers. In addition, we will induce mutual growth with small and medium enterprises by establishing a mutual growth model for technology cooperation and sharing semiconductor material capabilities and infrastructure, while improving the ESG management levels of our suppliers that can contribute towards securing the future competitiveness of the domestic material industry. We plan to support the growth of social enterprises to revitalize the social economy ecosystem and continuously strengthen social value creation activities to grow with the community.

In the governance sector, we aim to establish a Board of Directors structure for transparent and independent decision-making, and strengthen the roles and responsibility of the Board of Directors for major findings in the sustainability area such as ESG.



ESG Agenda Decision-Making and Implementation Framework



Stakeholder Communication

SK materials selects key stakeholders in order to promote sustainable strategy and operates various types of communication channels for key stakeholders. We listen and respond to stakeholders' opinions on major issues through communication channels reflect them in our business activities that create new values.

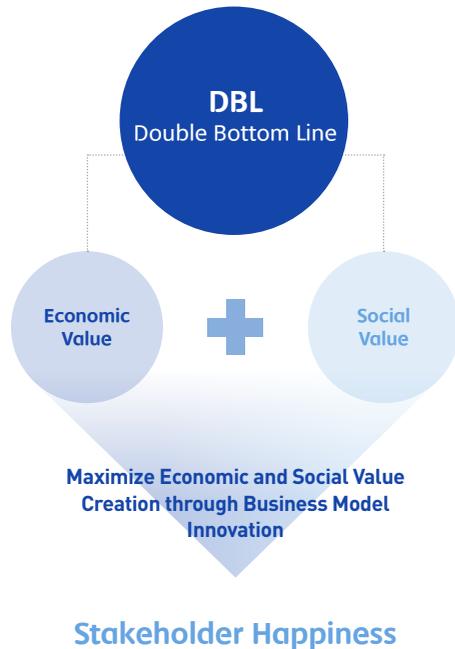
Stakeholders	Major Issues	Communication Channel
Investor	<ul style="list-style-type: none"> Economic value creation Protection of shareholder rights Healthy governance 	<ul style="list-style-type: none"> General meeting of shareholders Corporate briefing Website at: https://www.sk-materials.com/new/eng/html/main/ Website IR letter
Customer	<ul style="list-style-type: none"> Reinforcement of price and quality competitiveness Securing product safety Reduction of environmental impact 	<ul style="list-style-type: none"> VOC channel IT Industry exhibitions Industry associations Website YouTube channel
Suppliers	<ul style="list-style-type: none"> Support for mutual growth Creation of fair-trade environment Improvement of work environment 	<ul style="list-style-type: none"> Mutual growth council Visit to worksites Website
Society Local communities	<ul style="list-style-type: none"> Solving social problems Community development Safety-related accident prevention and damage minimization 	<ul style="list-style-type: none"> Regional institutions/ organizations NGOs Discussions and meetings with residents YouTube channel Website
Employee	<ul style="list-style-type: none"> Support for capability-enhancing Performance evaluation and compensation Balance between work and life Respect for human rights and diversity Enhancement of safety in workplaces 	<ul style="list-style-type: none"> Intranet website bulletin board Radio broadcasting YouTube channel Facebook page Website

Sustainability Performance Management System

Sustainability Performance Management

Through DBL (Double Bottom Line) management, SK Group aims to maximize economic value (EV) and social value (SV) in its business activities, and achieve mutual growth with society while creating diverse values by meeting the requirements from stakeholders including customers and society.
SK materials seeks to adapt and innovate DBL business models to create its own social and economic values.

DBL Direction



Social Value Measurement System

SK Group has developed and used monetary-based social value metrics methodology. Social value measurement is divided into three sectors: 'Indirect Economic Contribution Performance,' 'Business Social Performance,' and 'Social Contribution Performance.' It is a global trend to monetize and measure ESG performance quantitatively and, accordingly, SK Group also plans to lead the global standardization of social performance measurement based on the DBL management.

Indirect Economic Contribution Performance	Employment		Dividend	Tax payment
	Environment (E)	Resource consumption	Water	
Business Social Performance	Environment (E)	Environmental pollution	Greenhouse gas/Air pollution/Water pollution/Waste/Land use & Biodiversity	
		Social (S)	Quality of life	Increasing public interest/Crime prevention/Alleviation of inequality/Social service, etc.
	Consumer protection		Quality, safety, and information	
	Labor		Employment of vulnerable groups/Quality of life/Safety and health of members	
Social Contribution Performance	Social (S)	Mutual growth	Fair trade/Mutual growth with suppliers/Social contribution & procurement/Safety and health of suppliers	
		Governance (G)	※ Governance indicators are under review for future assessment	
	CSR activities	Donation	Voluntary work	

Sustainability Performance Management System

Social Value Performance

SK materials has measured social value since 2018 according to the SK Group's DBL methodology, and has constantly increased the social value creation along with economic value.

In 2020, we created a total of KRW 117.6 billion of social value, increased by 9% (9.5 billion) compared to that of previous year.

KRW 117.6 billion		
Indirect Economic Contribution Performance	Business Social Performance	Social Contribution Performance
KRW 133.5 billion	KRW -19.1 billion	KRW 3.3 billion
Employment KRW 76.8 billion	Environment (Process) KRW -24.7 billion	CSR activities KRW 1.4 billion
Employment KRW 35.8 billion		Donation KRW 1.9 billion
Employment KRW 20.9 billion	Society (Labor/Mutual Growth) KRW 5.6 billion	Voluntary work KRW 0.03 billion

* Separate Financial Statements basis

SK materials has expanded its employment and investment despite the economic crisis caused by the spread of COVID-19 and therefore was able to achieve better business performance. As such, the Indirect Economic Contribution Performance has improved, resulting in the increase in the number of employees and tax payment. In addition, to protect and gain trust from investors, we will maintain a consistent dividend policy. It is expected that Indirect Economic Contributions will continue to grow through the revitalization of the semiconductor industry.

In terms of the environmental performance from the Business Social Performance, pollutant emissions, water usage, and GHG emissions have been reduced through continuous efforts for process improvement and optimization, and the emission unit of resource use relative to production has been improved. We will continue to improve environmental (Resource consumption, Environmental pollution) performance by establishing specific and practical measures such as increasing efficiency of electricity use and building a green workplace along with ESG management.

In the area of social (labor/mutual growth) performance, improvements have continued due to employment of persons with disabilities, investments in employee's safety and strengthening technology-based mutual growth and support system. We will continue investing in safety facilities for our employees for SHE (Safety, Health, and Environment) management, and support suppliers by providing analysis support through integrated analysis support center and conducting mutual growth activities that revitalize the semiconductor materials ecosystem.

Despite a decrease in face-to-face voluntary work by employees due to the pandemic, the social contribution performance has more than tripled compared to that of 2019 through increasing group joint social contribution activities and donations, such as support programs for vulnerable groups children, and the Myanmar Cookstove Supply Project and establishment/support of a technology-based cooperation system. In 2021, we are planning to promote various social contribution activities such as supporting programs to foster local social enterprises.

Social Value Creation by SK materials (Unit: KRW 100 million)

Classification	Definition	Category	2018	2019	2020
Indirect Economic Contribution Performance	Any value from indirect contribution to the economy through corporate activities	Employment	588	705	768
		Dividend	356	365	358
		Tax payment	240	191	209
		Total	1,184	1,261	1,335
Business Social Performance	Any social value from product development/production/sales	Environment (Process)	-265	-260	-247
		Society (Labor/Mutual Growth)	53	66	56
		Total	-212	-194	-191
Social Contribution Performance	Any value created by social contributions to local communities	CSR Activities	0	0	14
		Donation	13	14	19
		Voluntary work	0.1	0.4	0.3
Total			985	1,081	1,176

* Separate Financial Statements basis

[Note] Social Value Creation by SK materials and its Subsidiaries (Unit: KRW 100 million)

Classification	Definition	Category	2018	2019	2020
Indirect Economic Contribution Performance	Any value from indirect contribution to the economy through corporate activities	Employment	777	952	1,141
		Dividend	370	477	593
		Tax payment	362	415	470
		Total	1,510	1,843	2,204
Business Social Performance	Any social value from product development/production/sales	Environment (Process)	-522	-537	-586
		Society (Labor/Mutual Growth)	55	71	72
		Total	-468	-467	-514
Social Contribution Performance	Any value created by social contributions to local communities	CSR Activities	0	0.1	28
		Donation	13	14	20
		Voluntary work	0.1	0.5	0.3
Total			1,055	1,392	1,738

* Consolidated Financial Statements basis, total SV creation by SK materials and its six subsidiaries

Sustainability Performance Management System

Social Value Activities of Employees

SK materials conducts a range of activities to raise awareness of social values among its employees. In 2020, we shared major social value issues through SV/ESG education, letters, in-house broadcasts called gbs, and Haenggarae (meaning 'Happier Tomorrow'), a mobile app that an employee can use in a daily basis to create social value.

Social Value Education

SK materials conducted SV/ESG education and team workshops for all employees, including newcomers. The education was focused on the basic concept of SV/ESG and the company's ESG strategy and major activities. Team workshops were held to discuss team missions and issues related to SV/ESG and to identify new ideas. 'mySUNI,' the SK Group's online education platform, is used to provide the related education. In 2021, we are planning to provide customized education to our Employees by making an in-house education program and personalizing the curriculum for each education target.

Classification	Education Contents
All Employees	<ul style="list-style-type: none"> Understanding SK's SV background and DBL management SV/ESG concept and SK materials' ESG strategy and activities Case studies of other companies' ESG management
Team Workshops	<ul style="list-style-type: none"> Discussion sessions with topics of SV/ESG issues Vision Sharing Workshop

Social Value Education

Classification	2019	2020
SV/ESG Online Education for Employees*	-	3,517 hours
On-site education**	83 times	3 times
Team Workshops	5 times	52 times

* Online education platform, mySUNI, started to operate in full-scale in 2020

** A decrease in on-site education and an increase in online education due to COVID-19

Sharing Major Issues of Social Value

SK materials shares the information on SV/ESG concepts and issues with its employees by publishing the SV Letter and providing in-house broadcasting (gbs)*. In 2020, SV Letter was sent five times, and it covered key topics related to ESG such as RE100 declaration and added a quiz to raise interest, which resulted in higher participation among employees. The in-house broadcasting (gbs) was provided for the purpose of internal communication between the CEO and employees regarding SK materials' ESG strategy. Employees watched the gbs program, discussed issues in team workshops, and a follow-up Q&A was given as a quiz on the issues for follow-up broadcasting.

Classification	2019	2020
SV Letter	31 times	5 times
gbs	6 times	6 times

SV Letter (Examples)



Haenggarae (Happier Tomorrow) App, Social Value Practice App in Daily Life

In October 2020, SK materials launched the Haenggarae (Happier Tomorrow) app, which allows employees to create social values and accumulate SV Rewards. Employees can authenticate various activities they perform through the Haenggarae app, from daily activities such as walking up stairs, using mugs instead of disposable cups, and minimizing food waste at the cafeteria to social contribution works such as donating blood and other in-house volunteer activities. The rewards are given and can be used to purchase social enterprise products, make donations, and for a half day vacation coupon, encouraging a virtuous cycle of social values and active participation. In 2021, the company will continue to expand the scope of its social value creation activities by adding programs such as plastic recycling and proper separate garbage collection.

Haenggarae App



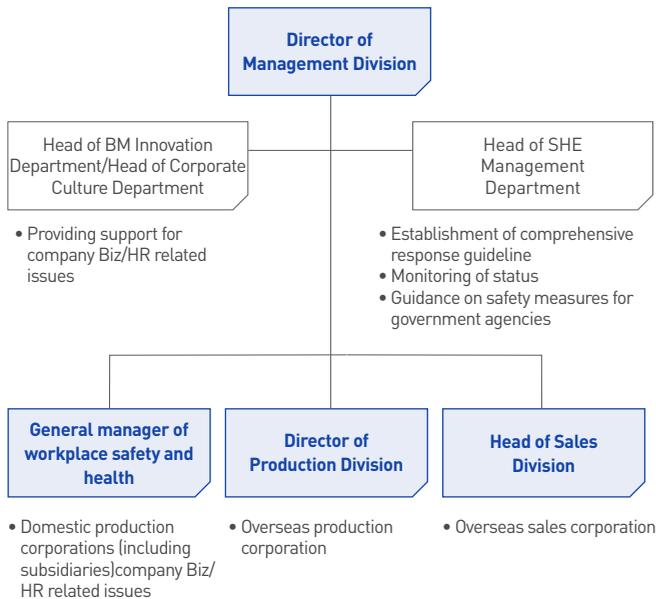
Responding to Global Crisis

Establishment of Response System to COVID-19

Comprehensive Response Headquarter

The company has established and operated a Comprehensive Response Headquarter to respond quickly to COVID-19 related emergencies. The Comprehensive Response Headquarter provides a preventive and emergency response system on a company-wide basis, including overseas corporations and subsidiaries. The Comprehensive Response Headquarter establishes comprehensive guidelines for proactive prevention activities, while each workplace sets up and runs response scenarios to prevent and minimize the spread of infection.

Organization of Comprehensive Response Headquarters for COVID-19



The World Health Organization (WHO) declared the coronavirus disease (COVID-19) outbreak a pandemic* on March 11, 2020. COVID-19 has threatened the global economy as well as human health. SK materials has established a response system and workplace safety net to protect employees and stakeholders from COVID-19, while providing support to vulnerable groups and quarantine officials of the community.

*Pandemic: The highest warning level for infectious diseases declared by the World Health Organization.

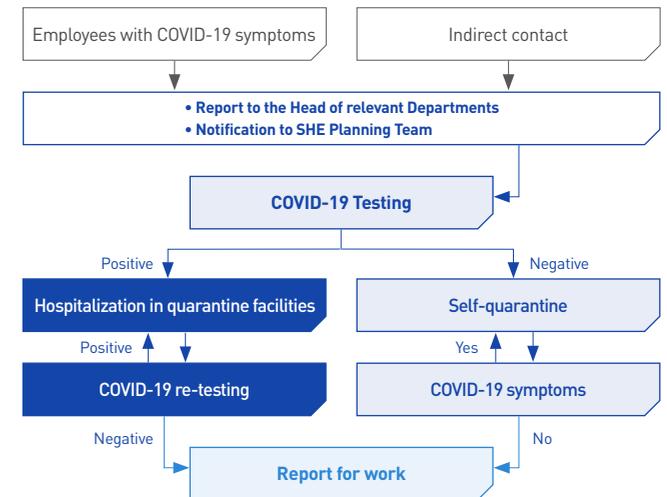
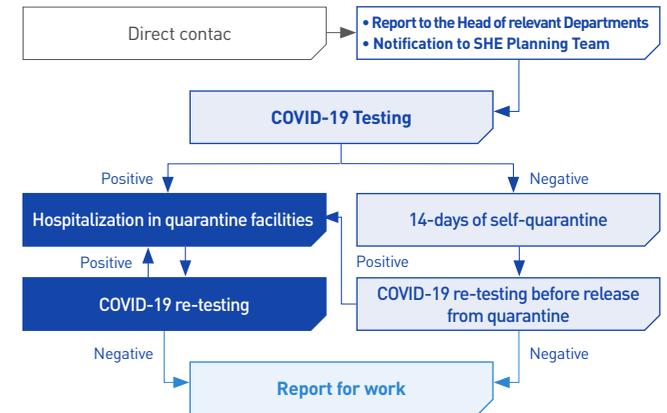
Establishment of Response Guidelines for Employees

The company has established guidelines for employees that reflect the specific nature of its business based on the quarantine guidelines from the relevant government authorities, including KCDC, and the SK Group's guidelines, and strengthens the quarantine response system. All employees actively put these guidelines into practice with an awareness that confirmed cases can occur at any time.

COVID-19 Prevention Criteria

Classification	Criteria
Entry	<ul style="list-style-type: none"> • Daily measurement and record of body temperature of all employees, contract workers, and visitors • Use of hand sanitizer placed in workplaces • Use of masks, disinfectant tissues, and hand sanitizers provided to all employees
Disinfection Rules on Working Day	<ul style="list-style-type: none"> • Wear a mask at all times • Conduct regular disinfection and ventilation • Minimize work space density by expanding flexible time system • Work from home and use vacations • Refrain from internal and external group events, such as education and office dinners
In-house Meeting	<ul style="list-style-type: none"> • Minimize face-to-face meetings • Use of hand sanitizers in meeting rooms • Refrain from eating or drinking during meetings
Business Trip	<ul style="list-style-type: none"> • No business trips to hazardous areas • Approval of executives according to guidelines before business trip • Report of health status and any significant matters • COVID-19 tests and self-quarantine for 14 days upon returning home

COVID-19 Proactive Scenarios



Responding to Global Crisis

Safety Management in Yeongju-si Plant

The head office and the site at Yeongju-si are responding to COVID-19 in a thorough manner and give special attention to external visitors, such as workers of suppliers and the drivers who supply raw and subsidiary materials. We conduct disinfection every day for the entire area and the vehicles in the plant. Thermal imaging cameras are installed at the entrance to the workplace to measure the body temperature of all visitors. It is mandatory for all employees in the plant to follow preventive rules, such as wearing masks and using hand sanitizers.

In March 2020, temporary workspaces were installed for the personnel in charge of the plant site to minimize face-to-face contact among employees. A total of 9 temporary work spaces were installed in production lines, and asked employees work in separate spaces according to their duties. We have implemented measures to operate the plant safely during the COVID-19 pandemic by establishing a Business Continuity Plan (BCP) to use the minimum personnel and to prevent facility closing due to emergency situations such as confirmed cases.

We temporarily suspended the operation of our cafeteria and provided alternative meals to our employees for three months starting from December 21, 2020 to respond to a rapid spread of COVID-19 in local communities. Convenience meals and lunchboxes were provided by each department to minimize face-to-face contact among employees, and strengthened guidelines on cafeteria usage were distributed before the restaurant reopened.

Temporary Work Space in Yeongju-si Plant



Entry and Exit Point Management in Head Office



Sharing Happiness with Local Communities

The company carried out a range of social contribution activities to support vulnerable groups whose livelihoods have jeopardized due to the prolonged pandemic situation, and to support COVID-19 public health officials. In March 2020, we donated 10,000 masks to the Yeongju-si Emergency Management Agency for vulnerable groups who had difficulties obtaining masks and continued basic living support projects under the quarantine rules such as improvement of the residential environment, meals, and heating.

In October 2020, we held an event called 'Cinema Week in Our Neighborhood' for COVID-19 public health officials and vulnerable groups of local communities. The event was held in the form of a drive-in theater to minimize face-to-face contact and provided cultural contents, such as movies and visible radio.

COVID-19 Kit for Physical and Mental Health

In order to deliver hope to vulnerable children who are more exposed to emotional and physical risks of COVID-19, the company donated 225 'COVID-19 Kits to Yeongju-si' to Yeongju-si DreamStart Center*. The kit consists of hygiene items for COVID-19 such as hand sanitizer and liquid soap, and play materials including clay play sets and coloring books, provided to vulnerable children aged 5-10 years.

*DreamStart Center: DreamStart Center is supervised by the Ministry of Health and Welfare that provides comprehensive and customized services to promote the holistic human development of all children in vulnerable groups, and preserves the right to have a fair start in life to become healthy members of society.

COVID-19 Kit for Healthy Body and Mind



Warm Contact With Meal Box Project

SK materials organized the 'Warm Contact with One Meal' Project to support Yeongju-si senior citizens who live alone and have difficulty obtaining meals due to the suspension of free lunch centers after the spread of COVID-19. The project was supported by organizations such as the Yeongju-si City Hall, Yeongju-si City Council, and Gyeongbuk Community Chest of Korea. 18,000 lunch boxes have been delivered to 300 elderly people living alone since January 2021. In addition to the funding from the company and the Group, SK materials employees participated in 'Happiness Sharing Donations' to expand the scale of the project, and local social enterprise 'Sobaek Local Food' and Yeongju-si Taxi Driver Volunteer Group also gave their hands to help the vulnerable groups of citizens.

Lunch Box for Warm Contact with One Meal Project



Materiality Assessment

Materiality Assessment Process

STEP 1. Identifying issue pool

The sustainability management issue pool is a complete list of issues organized to select key topics. After analyzing the listing issues of the industry and the key factors required by global sustainability management standards and evaluation criteria, we reflected them into the characteristics of the industry to identify a sum of 32 sustainability management issues.

STEP 2. Analyzing issues

To select key topics, we analyzed the internal and external environment of the company and conducted the materiality assessment.

Social interest measurement

Key Non-Financial Information Disclosure Indicators and ESG Assessment Items	Disclosure recommendations and assessment items of initiatives such as GRI Standards, TCFD, MSCI ESG(Sub-industry: Specialty Chemicals), SASB(Chemicals Standard), ISO 26000, UN SDGs, and UNGC
Frequency of Media Release	A total of 2,392 related media articles in the reporting period (2020.01.01-12.31)
Topics of Industry-specific Reports	Sustainability topics of industry-specific reports and global advanced companies' reports
External Expert Group Survey	Issue-specific interest survey based on expert network (2021.01.19-01.26)

Business Impact Measurement

Management Strategy Relation Analysis	Reporting, voting and analyzing the agenda of the Board of Directors and C-Level Conference in 2020
Employees Awareness Survey	Employee questionnaire on business impact of each issue (2021.01.19-01.26)

STEP 3. Identifying key topics

Following the measurement of social interest and business impact, the materiality assessment matrix was organized, and the top 8 out of 23 issues were selected as the main topics, whose relevant outcomes and plans are reported in the Priority Area of this report.

STEP 4. Identifying effectiveness

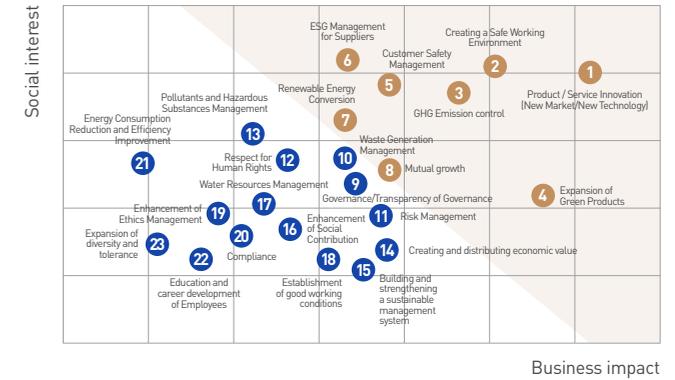
The selected key topics were approved by the board of directors.

SK materials has conducted the materiality assessment to identify sustainability management topics to be supervised and to share the assessment results with stakeholders while integrating the outcomes into the business strategy. Based on GRI Standards, an international guideline for sustainability management reporting, we have established a sustainability management issue pool and evaluated the importance of issues based on social interest and business impact.

Materiality Assessment Results

Based on the result that reflects business impact and social interest, the top 8 of 23 issues were selected as key topics. SK materials organized the 'Priority Area' based on performance and planning for 8 key topics. Performance and planning for the 15 general topics were divided into Environment, Social, and Governance areas, and described in the 'Sustainability Foundation.'

Materiality Assessment Matrix



Key Topics and Reporting Areas

SK materials divided the selected 8 key topics into 4 'Priority Areas.' The 'Priority Areas' reflect the company's sustainable strategic direction to create value for key stakeholders.

Strategy Direction	Key Stakeholders	Key Topic		Priority Area	GRI Standards	SASB	TCFD	SDGs
		Ranking	Topic Name					
High Performance	Customer	①	Product / Service Innovation (New Market/Technology)	[p.18-21]	-	RT-CH-410a.1	-	
		④	Expansion of Green Products	Enhancing Customer Value	-	RT-CH-410a.1, RT-CH-410b.1	-	
		⑤	Customer Safety Management		416-2	-	-	
High Responsibility	Society (Suppliers/Local communities)	③	GHG Emission Control	[p.22-25]	305-1-5	RT-CH-110a.1, RT-CH-110a.2	Governance a,b, Strategy a,b,c, Risk Management a,b,c, Metrics and Targets a,b,c	
		⑦	Renewable Energy Conversion	[p.26-29] Management of a Sustainable Supply Chain	302-1	RT-CH-130a.1	-	
		⑥	ESG Management for Suppliers		308-2, 414-2	-	-	
⑧	Mutual Growth		-	-	-			
High Satisfaction	Employee	②	Creating a Safe Working Environment	[p.30-33] Establishment of a Safe Working Environment	403-1-10	RT-CH-320a.1, RT-CH-320a.2, RT-CH-540a.1, RT-CH-540a.2	-	

PRIORITY AREA

In Priority Area, it includes four key areas that SK materials is focusing on to secure its sustainable growth. These four key areas were selected based on the results of materiality assessment and its sustainability strategy. We seek to set challenging goals and continuously manage our performance to develop as a global material company that leads ESG.

Enhancing Customer Value	18
Establishment of Green Workplaces	22
Management of a Sustainable Supply Chain	26
Establishment of Safe Working Environment	30



Enhancing Customer Value

Global Trend

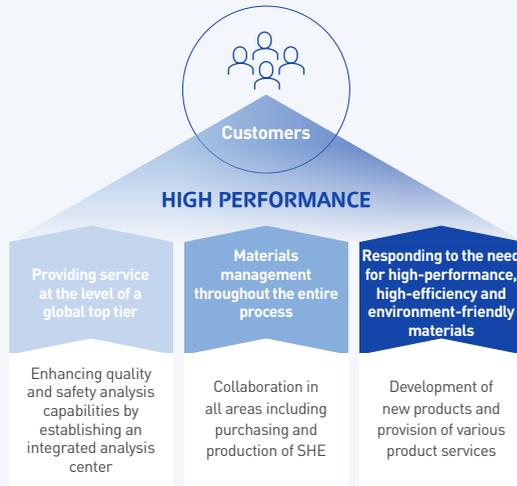
As B2B(Business to Business) is the basis of the semiconductor material industry, it is essential to produce products that fulfill customer's needs. With the IT industry's process refinement and product diversification, material quality requirements are increasing, and companies with quality and safety technology capabilities are gaining the upper hand based on diversified customer needs. For a company to grow continuously, it must pursue business environments and enhance customer value in rapidly changing business environments.

Opportunity	Challenge
<ul style="list-style-type: none"> • Growth of IT industries based on new technologies such as 5G, AI, and autonomous driving • Increased business opportunities for high-efficiency and green materials • Improving production efficiency and product quality through the development and application of digital technology 	<ul style="list-style-type: none"> • Improved quality, eco-friendliness, and safety level • Speedy response to technology evolution by customers

Our Approach

SK materials is creating value for customer by rapidly responding to changes in customer needs and by addressing customer pain points in a timely manner through new product development and differentiated services. We concentrate on R&D and business model innovation to provide products and services that can satisfy our customers and consider product safety in the process of product planning, production, management, and supplying to ensure that our products are safe and qualified.

Direction of Customer Value Creation



Product Competitiveness Innovation

SK materials has one basic technology laboratory and five teams in the CRD Division to conduct research and development activities in each area. To proactively cope with changes in the environment of our major business areas, we are concentrating the capabilities on material development, while developing green materials and building capacities for new business items to diversify our business portfolio.



Development of High-Performance Materials

As the IT industry grows on the strength of new technologies such as 5G, AI, and autonomous driving, applications of semiconductors and displays are expanding. As a result, the materials required for semiconductor and display production are diversifying, and the level of performance required is getting higher. The company is committed to responding proactively to these changes in downstream industries and strengthening the performance of material products to meet the rapidly changing needs of its customers. In particular, we are striving to develop next-generation and high-performance materials in the fields of etching and deposition gases, patterning materials, display materials, and secondary battery materials.

Development and Use of Green Products

Customers seek for green materials that can contribute to reducing the environmental impact of products, and the green material market is growing. As actively securing green material technology is a key factor for sustainable growth, SK materials is focusing on developing green materials as a major direction for research and development. In particular, we are focusing on the development of low GWP¹⁾ green cleaning gases while striving to upcycle waste resources and secure eco-friendly raw materials. We will expand our green material portfolio in collaboration with companies and institutions that have world-class green technologies. To illustrate, we are working with the Korea Institute of Energy Research, developing and applying CCUS²⁾ technology and planning to further reduce the environmental impact of our products.

1) GWP: Global Warming Potential

2) CCUS: Carbon Capture Utilization and Storage

Enhancing Customer Value

Stabilization of Core Material Supply Chain

SK materials is pushing for the development of global monopolistic materials and seeks to secure new markets while contributing to stabilize the supply chains of our customers.

We have been developing ultra-high purity hydrogen fluoride technology since 2019, and producing it since 2020. Hydrogen fluoride is a core material used in the semiconductor etching and cleaning process to selectively corrode unnecessary parts to create semiconductor circuit patterns and to clean residues on the surface of semiconductors generated during the process. Since it is a highly toxic and reactive product, advanced safety and contamination risk management is essential in the process of production, storage, handling, and transportation, and high-level purification technology is also needed to produce ultra-high purity hydrogen fluoride products.

After understanding the distinctive characteristic of semiconductor industry and the importance of stabilizing the overall supply chain of such a monopolistic material, SK materials started developing ultra-high purity hydrogen fluoride in September 2019. We worked on the development of an analysis method and storage container technology for quality control to ensure safety in the storage, handling, and transportation process while focusing on securing purification technology. These efforts led us to succeed in developing a ultra-purity (99.99%) hydrogen fluoride in December 2019, and the product was officially launched to market beginning in June 2020. We plan to contribute to the stable growth and competitiveness of the domestic semiconductor industry through technology innovation and safety assurance.

R&D capability

SK materials is expanding its research infrastructure and actively hiring specialist personnel by expanding its investment in strengthening the R&D capabilities of employees. In addition, while enhancing our own R&D capabilities, we are expanding the scope of R&D in cooperation with companies and institutions that have high-performance materials and advanced green technologies such as Showa Denko K. K., Tri Chemical Laboratories Inc., JNC CORPORATION, and Korea Institute of Energy Research.

By 2023, we plan to increase the size of our R&D manpower to approximately 2.5 times that of 2020 and more than double the R&D investment cost. A sum of 40 joint research projects will be conducted with customers, suppliers, and research institutes by 2023 to develop core technology for future growth engines.

R&D Manpower

Classification	Unit	2018	2019	2020
R&D personnel	Person	26	28	31

R&D Investment

Classification	Unit	2018	2019	2020
R&D Investments	KRW million	7,426	8,530	9,236
R&D Cost Ratio*	%	1.67	1.88	1.80

* R&D Cost Ratio to Sales

2020 R&D Capability Program

Classification	Program	Description
Seminar	Seminar on Fluoride Chemistry	<ul style="list-style-type: none"> Understanding ECF¹⁾ Technology Understanding Fluoride Coating Technology
	Seminar of External Experts	<ul style="list-style-type: none"> Research Trends of Low Temperature SiN²⁾ Deposition Technology Research Trends of Oxide Semiconductors
Methodology and Process	Experiments Design Training	<ul style="list-style-type: none"> Mixture Statistical Modeling
	Product Development Training	<ul style="list-style-type: none"> Project Management New Product Development Process
Patent	Patent Training	<ul style="list-style-type: none"> Patent Infringement Literature Search

1) ECF: Electrochemical Fluorination

2) SiN: Silicon Nitride

Intellectual Property Management

SK materials recognizes the importance of strategic intellectual property management in the era of the Fourth Industrial Revolution and focuses on securing and managing the patents that will enable us to lead the future of industry. As of the end of 2020, a total of 168 patents have been applied for, both in South Korea and abroad, focusing in particular on R&D activities, including 99 patents in the last three years. In 2020, we applied for patents on the technology of low GWP products and thin-film transistor manufacturing technology to expand our patent portfolio based on the performance in enhancing environment-friendliness and competitiveness. In addition, the 'Invention Day' event is held to encourage active invention activities and patent applications by employees. Employees have proposed their ideas in the event and have been given a reward when an idea leads to a patent application. A total of 13 new invention ideas were proposed at the Invention Day event, which was held five times in 2020. We completed 2 applications in October, and 3 applications are scheduled to be filed.

Patent Applications & Registrations

(Unit: ea)

Classification	2018	2019	2020	
Patent Applications	Yearly-basis	17	42	40
	Cumulative patents	86	128	168

Enhancing Customer Value

Product Quality and Customer Safety Management

Declaration of Product Quality and Customer Safety Principles

SK materials has established the quality policy with its subsidiaries and has disclosed it on its website. In 2021, 'Pursuing Happiness of Customers' has been set as the first principle of quality policy, and to strive beyond simply achieving quality, we are working proactively for customer safety through compliance with international environmental management standards and customized service. As stated in quality policy, we are committed to pursue customer happiness by providing the best value to customers in terms of quality and safety.

Quality Management Policy

SK materials pursues customer satisfaction through the best quality to secure the trust of employees and stakeholders and actively implements the following for sustainable quality management:

1. Customer Satisfaction with the Highest Quality and Service	We pursue customer happiness by providing the highest quality products and services as partner to create the value of customer satisfaction.
2. Building Trust through the Advanced Quality System	We build the trust of our customers in differentiated quality competitiveness through preemptive and advanced quality system operation and continuous quality innovation.
3. Best Partner with Innovative Products and Technologies	We become the best partner that provides customer satisfaction through technology and innovative product development.
4. Voluntary/Willing Participation of All Employees	All employees strive to participate in the implementation of world-class quality management based on VWBE* organizational culture.

* Voluntarily, Willingly, Brain Engagement

Quality Analysis Competitiveness Enhancement

Technological advancement in the IT industry has increased the need for high quality of materials. To secure the trust of customers, it is necessary to have the technical capabilities to manage and analyze quality at all stages of product manufacturing.

In particular, as the level of refinement of the process gets delicate, small change in quality amplifies the impact on the quality of a product. Therefore, it is even more important to secure the highest levels of quality management capabilities as well as the advancement of analysis techniques.

As greater emphasis is laid on the importance of quality management of materials, internal quality analysis capabilities as well as the quality management of suppliers in the overall value chain have become more essential. We provide a validation and review system on process quality control to suppliers to meet their needs on obtaining human and capital resources to secure analysis infrastructure and quality management capabilities.

In this vein, SK materials put a great effort on building technical capabilities to improve quality control that reaches customers' expectation, while managing that of the supply chain by providing analytical technologies and consulting services to suppliers.

We are expanding the scope of our analysis technology and building a service collaboration network to share capabilities and infrastructure with suppliers based on the integrated analysis center established at the end of 2019. In 2020, we secured analysis technology and completed 34 analysis services requested by customers and suppliers. SK materials is strengthening its quality analysis capabilities to secure reliability in the entire manufacturing process and support quality improvements of its suppliers.

Integrated Analysis Center



Quality and Analysis Competitiveness Enhancement Direction and Action plan

Improving quality control standards

- Securing trace analysis method and pretreatment technology
- Introduction of impurity identification and pollution control technology
- Advanced analysis equipment

Internalization of analytics capabilities

- Establishment of a chemical analysis technology development center
- Development and establishment of comprehensive analysis technology for all material areas
- Securing external cooperation systems such as research institutes and universities

Quality control for all phases

- Identification/Management/Control of Quality Risk Factors
- Certification and operation of Global quality management system (IATF 16949)
- AI/Digital-based quality management system

Enhanced quality assurance of suppliers

- Technical support for optimal analysis method for each material
- Identification and support of key quality factors using AI/Digital

Product Safety Evaluation

SK materials reviews and guarantees the level of containment of hazardous chemicals related to RoHS, REACH, and GHS in a product. Upon the request from the customer, we conduct the review and deliver a warranty with safety information and a safety manual.

Enhancing Customer Value

Customer Satisfaction

Customer Communication

SK materials is pursuing customer satisfaction by accurately identifying and promptly responding to customer requirements through the Voice of Customer (VOC) management process. In addition, we broadened customer contact points through major IT industry exhibitions and industry associations. We have also widened up the value we offer to our customers by identifying the needs of various customers and industrial environments and reflecting them in our business strategies.

VOC Management Process



Customer Satisfaction Survey

SK materials conducts annual satisfaction surveys targeting customers who use or distribute our products. The satisfaction survey is conducted by sending a questionnaire consisting of 10 items such as quality, communication, and improvement efforts to customers via e-mail, fax, and mail. We conduct surveys once a year and special surveys on demand and respond to complaints. In 2020, the customer satisfaction score of SK materials increased by 0.1 points compared to that of the previous year due to improvements in the areas such as 'The Response to Complaints,' 'Technical Services,' and 'Paperwork Performance,' and so on. Based on the results of the satisfaction survey, we will focus on the feedbacks for the items with relatively low scores and identify improvement tasks.

Customer satisfaction survey result

Classification	Unit	2018	2019	2020
Customer satisfaction survey result (Out of 10)	Points	9.2	9.3	9.4

2019 Semicon Korea Exhibition



Invitation for 2019 Semicon Korea Exhibition



Establishment of Green Workplaces

Global Trend

In 2020, the Korean Government set the national goal of achieving carbon neutrality by 2050 and strengthened the relevant regulations. The European Union (EU) is preparing to introduce a carbon border tax by 2023. Large-scale investment companies have formed a Global Initiative that actively participates in reducing the environmental impact of business sites, such as water resources and waste. Requirements of domestic & foreign regulations regarding climate change and shareholders are strengthening significantly.

Corresponding to these global trends, SK materials has prepared practical measures to establish a green workplace for its survival and fulfillment of its social responsibilities: we believe that reducing environmental impact is the very first step of creating any kind of new values.

Opportunity

- Solidifying the corporate identity as a green company and promoting product competitiveness through a proactive response to climate change
- Satisfying customer needs and securing new business opportunities by developing and applying green technologies

Challenge

- Strengthening domestic and foreign regulations on climate change
- Increased level of demand from investors to respond to climate change
- Enhancement of customers' environmental impact assessment standards

Our Approach

SK materials set three directions: 1) reducing GHG emissions, 2) reducing water consumption and expanding recycling, and 3) managing waste emissions; we have also set the mid-to-long-term goals for each direction to build a green workplace. We plan to evaluate the achievement level every year and transparently disclose such level to show SK materials' commitment towards establishing a green workplace and become a leading company that reduces environmental impact in workplace.

Green Workplace Objectives

Green Gas	100% electricity sourced from renewable energy by 2030	
Water resources	100% wastewater recycling by 2030 (50% improvement in water withdrawal intensity in comparison to 2020)	
Waste	95% waste recycling rate by 2023	

Management Process of Climate Change Risk & Opportunity

Each year, SK materials goes through a process of identifying and evaluating company-wide risks and opportunities related to climate change. We evaluate the severity and potential of risks to its major tasks and issues, stakeholder demands and expectations, and constantly improves its management process to use the identified risks and opportunities for managing financial and non-financial risk at SK materials. Risk factors are divided into physical risks due to short-term or long-term climate change and transition risks due to market, technology and regulatory shifts related to the low carbon economy. Opportunity factors include improving the efficiency of resources, expanding business areas through R&D related to climate change, and building social value (SV) due to increased green requirements in markets including the consumer market. Physical risks caused by environmental factors, such as typhoons, floods, heavy rain, heavy snow, or earthquakes, are included in the Business Continuity Plan (BCP).

Greenhouse Gas Emission Reduction

SK materials joined RE100 and declared to meet Net Zero by 2030 to clarify its commitment to combatting climate change. To establish a mid-to-long-term plan, we have improved the energy use efficiency of our facilities and expanded the use of renewable energy to maximize our response to climate change. We also conduct employee awareness campaigns to induce an active participation of our employees in reduction of GFG (greenhouse gas) emission.

RE100 Admission

In December 2020, SK materials joined RE100 (Renewable Energy 100), which is organized by a multinational non-profit organization, The Climate Group. RE100 is a global initiative bringing together businesses committed to 100% use of renewable electricity, and its members must achieve transitioning 100% of their power consumption to renewable energy sources such as wind and solar energy by 2050. SK materials has set a goal to achieve RE100 early by 2030 in order to respond more actively to climate change issues, and we have established a relevant strategy to complete our mission. SK materials uses about 2% of renewable energy through the Green Premium* system as of February 2021 and intends to expand the proportion of renewable energy use by introducing additional RE100 implementation methods such as the 3rd party PPA system**. In 2021, we plan to establish a RE100 implementation plan, submit it to The Climate Group, and increase the ratio of renewable energy use.

* Green Premium: A system in which electricity consumers pay a certain premium above the general electricity rate to selectively purchase renewable energy

** 3rd Party PPA System: A system in which a Power Purchase Agreement (PPA) is signed between renewable energy generators and electricity consumers

Establishment of Green Workplaces

Net Zero Declaration

In June 2021, SK materials declared its participation into the Net Zero* to achieve its vision to make the net emissions '0' through internal and external reduction or offset activities to reduce GHG emissions equivalent to the carbon emissions generated by its activities. We plan to mitigate GHG emissions throughout our management activities, including Scope 1 and 2, regulated by law in Korea, as well as Scope 3.

In particular, NF₃, one of SK materials' main products, is not included in the domestic GHG targets, but is already designated in international GHG targets and has a significant impact on global warming. To reduce direct and indirect emissions of NF₃, we plan to introduce a recovery and treatment system to block the emissions in the short term. We will develop a substitute for NF₃ to make fundamental improvements in the mid-to-long term.

SK materials has implemented the carbon credit through the UN CDM** project since 2020, and will continue to participate in CDM business opportunities that can contribute to reducing global carbon emissions. In addition, we plan to proactively implement GHG reduction activities through the use of renewable energy.

* Net Zero: Achieving a balance between the carbon emitted into the atmosphere, and the carbon removed from it during the business activity.

** CDM: Clean Development Mechanism is a carbon offset scheme that allows developed countries to claim the emissions saved by their funding of GHG emissions-reducing projects in other countries as part of their own efforts to meet international emissions targets.

Enhancing Response to Climate Change in the Process

SK materials holds monthly performance management meetings led by the CEO to minimize GHG emissions from production and continuously increase energy efficiency. In particular, as an electricity usage accounts for about 90% of GHG emission, we focus on managing such a power consumption as a priority task.

In 2020, we conducted energy efficiency improvement activities of the electrolysis process. The voltage required for the electrolysis process was decreased by reducing power consumption throughout the process, and we plan to further increase the energy efficiency by carrying out a project in April 2021 to reduce the amount of power loss.

We have conducted a range of power saving tasks in production processes other than the electrolysis process, and made efforts to reduce the consumption of LNG for fuel. In 2020, we reduced the LNG consumption by about 144 tons through reduction activities such as increasing the fuel efficiency of Reboiler¹⁾ and Reflux Drum²⁾ of the SiH₄ production process.

1) Reboiler: Heating evaporator in the distillation column

2) Reflux Drum: Steam Condenser

Improving GHG Reduction Consciousness

SK materials recognizes the importance of climate change response activities and implements consciousness improvement activities so that employees can actively participate in energy-saving activities. We encourage the employees to participate in daily environment-friendly activities such as 'taking the stairs in the work place,' 'using shuttle bus or public transports when commuting,' and 'minimizing food waste' which could ultimately reduce methane generation during the disposal process of food waste. We have launched an everyday social problem-solving platform for all employees called Haenggarae which allows them to accumulate points for the eco-friendly activities they carry out in their daily lives, and share various climate change response activities that they can practice through SV Letter.

GHG Emissions

Classification	Unit	2018	2019	2020
GHG Emissions	tCO ₂ e	246,151	246,868	229,031
Scope 1	tCO ₂ e	23,489	24,352	26,415
Scope 2	tCO ₂ e	222,662	222,516	202,616
GHG Emission Intensity	tCO ₂ e / KRW million	0.55	0.54	0.44

Energy Consumption

Classification	Unit	2018	2019	2020
Total energy consumption	TJ	5,039	5,053.6	4,684.5
Electricity	TJ	4,584.6	4,581.6	4,171.8
Gas (LNG)	TJ	442.1	458.0	498.4
Gasoline	TJ	1.9	1.8	1.5
Diesel	TJ	11.4	12.2	12.7
Energy Consumption Intensity	TJ / KRW million	0.01133	0.01112	0.00901

SV Creation through Haenggarae Application



Establishment of Green Workplaces

Water Consumption Reduction and Recycling Expansion

Water resources are not only the foundation of our business, but also a public resource used by all members of the community. Even SK materials consumes less water than other manufacturing industries, as the most of its water is used in production processes, we seek to increase the efficiency of water consumption and recycling amount, while meeting 100% wastewater recycle by 2030.

Water Resource Risk Management

In terms of Life Cycle Assessment, SK materials identifies and manages risks at all phases of water resource use: intake, use and wastewater treatment. In February 2021, the WRI Aqueduct Water Risk Atlas, a major water resource risk analysis tool, was used to assess water quantity and quality risks related to short-term and long-term climate change, such as drought, flooding, and seasonal changes, as well as regulatory and reputational risks. The evaluation will be carried out on a regular basis every year. Our water risk analysis found that Yeongju-si plant is located in an area with less than 40% water depletion risk, a relatively low risk, while the Zhenjiang (China) plant showed 40% ~ 60% of risk.

SK materials manages the water resource risk of the Yeongju-si plant in consideration of sales and production volume, and plans to expand the scope of management to its plants in China. Yeongju-si plant has taken water from two wells in Seocheon, a river in Yeongju-si, so it had no difficulty in securing water until 2020. It will be difficult to develop an alternative water source within a short period of time due to the regional characteristics of the plant's location and the nature of domestic water supply. SK materials is working to reduce water use and to engage in water recycling in order to minimize its dependence on water resources. The water risk analysis also shows that physical risk quality is less than 40%, while the regulatory and reputational risk are less than 20%.

SK materials aims to achieve 100% recycling of wastewater by 2030 to reduce water intake, and has identified tasks in this area. Water resource risk results of major suppliers will be included in the ESG item in SK materials' evaluation for suppliers. We plan to continue to manage the water resource risk of its suppliers.

Water Resource Risk Assessment Methods

Risk Analysis Tool	WRI Aqueduct Water Risk Atlas
Analysis Scenario	<ul style="list-style-type: none"> • Time Frame: Baseline and Future (2030, 2040) • Physical Frame: 15 domestic and overseas worksites in SK materials and its supply chain - SK materials: Seoul office and Yeongju-si plant (Korea) and Zhenjiang plant (China) - Supply chain: 12 manufacturing plants of 5 major suppliers • Baseline indicators: Physical quantity & quality risk, Regulatory and Reputational risk • Future Scenarios: Pessimistic, Business as Usual, Optimistic • Future risk measurement units: Absolute value, changes compared to baseline

Results of SK materials Plant Water Resource Risk Assessment



Water Consumption Reduction and Recycling Activities

SK materials is developing reprocessing systems for its wastewater to reduce water use and minimize the environmental impact caused by wastewater discharge through water recycling. We are working to identify tasks to secure recycled water that meets the water quality standards for each process, thereby reducing water use throughout the production process. In 2020, wastewater from cooling towers during production was recycled into cleaning water for scrubbers*. In 2021, we plan to upgrade the recycling performance management system and find additional recycling tasks. In order to reduce water consumption in the Value Chain, we have reflected the certificate of environmental management in our comprehensive evaluation to promote the importance of water resource management. We will monitor the water consumption of suppliers and support their reduction efforts.

* Scrubber: A device that removes some particulates or gases

Water Recycling Meter



Water Withdrawal and Generation

Classification	Unit	2018	2019	2020
Water Withdrawal ¹⁾	m ³	1,206,789.1	1,088,305.0	1,031,475.5
Surface Water (River Water)	m ³	1,175,288.1	1,054,493.0	997,271.5
Ground Water	m ³	288.0	920.0	0.0
Public Water	m ³	31,213.0	32,892.0	34,204.0
Water Withdrawal Intensity	m ³ /KRW million	2.71	2.39	1.98
Wastewater ²⁾	m ³	607,345.0	748,828.0	656,688.0

* Sejong-si Institute's wastewater disposal cannot be calculated, due to the use of integrated wastewater management at the SK trichem Wastewater Disposal Plant.

** Seoul Office's water intake and wastewater disposal cannot be calculated, due to the use of integrated wastewater management by the building owner of Seoul Office.

Establishment of Green Workplaces

Waste Generation and Reduction Management

Including the wastes generated from the resident suppliers in Yeongju-si plant area, SK materials manages and generates general and hazardous wastes under legal procedures. In addition, we continue to conduct recycling activities such as the introduction of pre-treatment facility for sludge, which was unrecyclable due to ammonia, to minimize the environmental impact caused by waste generated during the manufacturing process. We aim to achieve a waste recycling rate of 95% or higher in 2023 and obtain a ZWTL* Gold rating by carrying out these activities.

* ZWTL: Zero Waste To Landfill

Building Waste Treatment Process at Yeongju-si Plant

SK materials has established the waste management standard to manage the process from waste generation to disposal. In addition, we have adopted a unified waste disposal process that includes our suppliers in the plant for the legal waste generation. The roles and responsibilities of our suppliers are specified in the waste management procedure, while supporting waste type analysis and conducting inspections of generated waste.

Improvement of Wastewater Treatment System

SK materials improved the wastewater treatment system in 2020 to recycle solid waste generated in the form of sediment in the wastewater generation process. A Pre-Stripper* was installed in place of the existing dewatering treatment and Nickel (Ni) coagulation and sedimentation facilities. Through this, the precipitated solid waste that had been landfilled in the previous process was integrated with other solid wastes to be recycled. The first commissioning for the new system was completed in December 2020, and the system is expected to be fully operational in July 2021 after review and construction. The application of the new process will recycle about 3,822 tons of solid waste landfill annually, and wastewater treatment chemicals that were used in the existing process will no longer be used with saving the additional resource usage.

*Pre-Stripper: A device for separating NH₃ from solid waste that enables recycling by removing odors generated by non-separation of NH₃

Introduction of SiO₂ Dust Compression Facilities

SK materials introduced a compression facility in 2020 to recycle dust generated when recycling SiO₂ (silicon dioxide) waste. Dust is difficult to be recycled in its primary form, but can be recycled as a subsidiary material for steelmaking when processed into pellets through compression. Construction and commissioning of the facility were completed in October 2020, and it is under operation from early 2021. Recycling of SiO₂ dust is expected to reduce waste by approximately 14 tons per year.

SiO₂ Dust Compression Facility



Before Installation



Dust type waste

After Installation



Compression process

Pellet type subsidiary material

Waste and Recycling

Classification	Unit	2018	2019	2020
Waste Generation	Tons	13,895.6	13,926.9	16,249.1
General Waste	Tons	13,822.0	13,716.1	15,284.4
Designated Waste	Tons	73.6	210.7	964.7
Waste Generation Intensity	KRW 100 million	3.12	3.06	3.12
Amount of Waste Recycling	Tons	8,825.7	10,252.7	12,091.7
General Waste	Tons	8,780.5	10,091.9	11,980.1
Designated Waste	Tons	45.2	160.8	111.6
Rate of Waste Recycling	%	63.5	73.6	74.4

* Seoul Office's waste generation and its recycling rate cannot be calculated, due to the use of integrated waste management by the building owner of Seoul Office.

** Based on Waste Allbaro system (waste integrated managing system used by Korean Environment Corporation)

Management of a Sustainable Supply Chain

Global Trend

Promoting the level of ESG performance of the entire supply chain by protecting human rights, preventing safety accidents, and improving environmental performance of suppliers enable high quality and competitiveness of a company's products and services. Therefore, the relationship between a contractor and its sub-contractors should go further than a mere contract to a solid partnership that creates a sustainable industrial ecosystem. The Occupational Safety and Health Act, revised in 2020, strengthened the scope of responsibility and the level of penalty for the contractor, and the EU plans to legislate a mandatory supply chain due diligence bill by 2021. We intend to establish a management system to manage ESG issues that may occur in the supply chain and assist suppliers to enhance their financial and non-financial capabilities.

Opportunity

- Improving supply chain safety through support programs to stabilize the management of suppliers
- Building sustainable partnerships by resolving regulatory risks related to ESG of suppliers

Challenge

- Expanded corporate legal responsibility for ESG risk of suppliers
- Insufficient supply chain ESG management level and capabilities

Our Approach

SK materials understands that managing ESG risks and raising the level of ESG of suppliers is true mutual growth in a business environment in which the importance of the ESG area is emphasized. In 2020, we focused on establishing a management system by enacting a supplier code of conduct and reorganizing the evaluation system. In 2021, we plan to expand a range of activities to raise the level of ESG of suppliers based on our management system.

Supply Chain System to Secure Sustainability

Management of a sustainable supply chain	<ul style="list-style-type: none"> Partner Company Code of Conduct Assessment of Business Partners Operation of Mutual-growth council
Enhancement of ESG Management Level of Suppliers	<ul style="list-style-type: none"> ESG Risk Assessment of Suppliers Operation of Mutual-growth Programs including ESG Risk Improvement Enhancement of Environmental Management Capabilities and Incentive (Atmosphere, Water resource, Waste and etc)
Fair Procurement	<ul style="list-style-type: none"> Fair procurement of raw and subsidiary materials Expansion of social purchasing

Status on Suppliers

SK materials' suppliers supply essential goods, construction, services, and transportation to the company. They supply raw and subsidiary materials to the production plant located in Yeongju-si or provide services such as manufacturing equipment necessary for the work process; some reside in the Yeongju-si plant as they provide regular services such as facility maintenance and repair. We classify core suppliers who have maintained excellent scores in frequent and annual evaluations among those that supply at a certain scale or higher, or that supply major products and services.

Suppliers in 2020

Suppliers (Number)	Core Suppliers (Number)	Proportion of Purchases from Core Suppliers (%)
1,033	18	19

* Tier 1 Suppliers

Supplier Management System

Supplier Code of Conduct

SK materials established a supplier code of conduct in December 2020 to create a sustainable industrial ecosystem. The Code of Conduct is based on the Code of Conduct Version 7.0 of the Responsible Business Alliance (RBA), and 28 suppliers including all core suppliers have agreed to comply with the code. In 2021, we plan to expand the number of suppliers who have consented to the code of conduct, while evaluating their compliance with the code and inducing improvements.

* Including suppliers of SK materials and its subsidiaries

Suppliers Code of Conduct Items

Items	Description
Human Rights and Labor	Preventing forced labor and labor by minors, guaranteeing freedom of association, management of working hours and wages, protection of human rights, elimination of discrimination, etc.
Safety and Health	Safety protective equipment, safety education, prevention of exposure to harmful substances, health care, sanitary inspection, etc.
Environment Protection	Management of pollutant emissions, minimization of resource use, management of energy use and GHG emissions, environmental compliance, etc.
Ethical Management	Anti-corruption, fair trade, internal reporting system, prohibition of use of conflict minerals, etc.
Management System	Willingness to comply with the Code of Conduct, monitoring system, efforts to improve, etc.

Management of a Sustainable Supply Chain

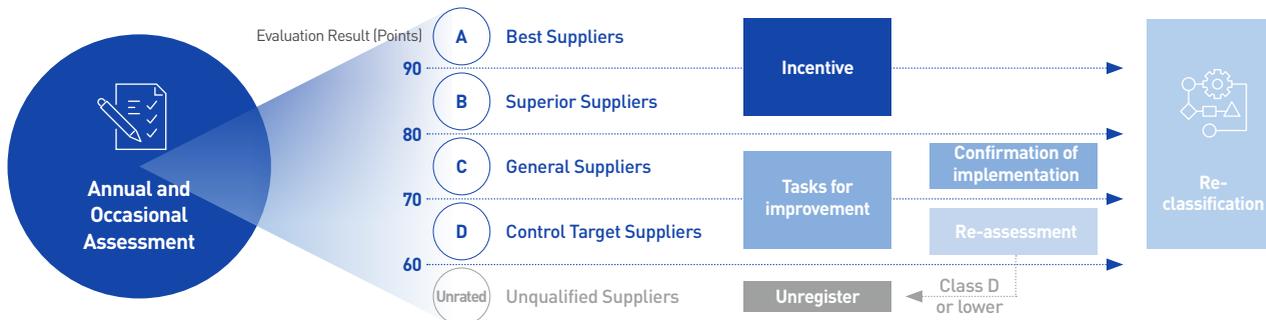
Assessment of Suppliers

The assessment of suppliers is divided into the areas of management, technology, quality, environment, and safety. SK materials conducts assessment prior to official registration and once every two years. In particular, the environment and safety areas consist of 46 checklists related to system management, education and training, health promotion, emergency preparedness and response, and on-site operation management to evaluate the level of implementation.

Companies with 70 or higher points (grade C) in the initial assessment are considered qualified and therefore registered as a supplier. A company that has obtained higher than 60 points and lower than 70 points (grade D) is reassessed after implementing improvement measures, if and then can be a supplier again when it scores 70 points or higher.

The assessment is conducted through on-site due diligence and can be replaced by a written assessment if only a supplier obtains the score of 90 points or higher (grade A). Incentives are provided to the best suppliers including granting priority negotiation rights. If current suppliers score lower than 60 points in annual assessment, they will be classified as unqualified business and no longer able to supply products to us.

Comprehensive Assessment Process



Assessment Items

Category	Description
Management	Business plan, customer satisfaction survey, employee training, etc.
Finance	Financial safety, profitability, etc.
Productivity	Work standards, facility inspection system, etc.
Purchasing and Materials	Management standards of partners, material storage and transportation, etc.
Technology	R&D activities, cost reduction, etc.
Quality	Quality management certification, quality management system, quality assurance system, etc.
ESG Risk	Human rights and labor, safety and health, environmental protection, ethical management, management system

Mutual Growth Council

In 2020, SK materials established the Mutual Growth Council to reflect the needs of suppliers and expand its communication platform with suppliers. We are establishing an overall communication system within the value chain by inviting subsidiaries and their suppliers to the council. In 2021, we plan to expand the council participation, while developing and operating a program for mutual growth based on opinions collected from suppliers.

Establishment of Mutual Growth Council

In March 2020, SK materials established the Mutual Growth Council, in which 28 core suppliers* participate as company members. In June and November 2020, the meetings were held with members of the council, and 25 companies participated in the meetings, with only the three companies located abroad not joining. We introduced the mutual growth program and performance, while awarding the three best suppliers who actively participated in the mutual growth program. We also shared our plans for mutual growth in 2021 and gathered the opinions of our suppliers. We will continue to strive to understand the needs of our suppliers and build mutual understanding and consensus through the council.

* Including suppliers of SK materials and its subsidiaries

Opinions and Treatment of the Mutual Growth Council in 2020

Number of Receptions (cases)	Number of Treatments (cases)	Treatment Ratio (%)
6	6	100

Management of a Sustainable Supply Chain

Fair Trade and Mutual Growth Agreement

SK materials signed a fair trade and mutual growth agreement with its suppliers in June 2020 to establish autonomous fair trade with the suppliers, and to enhance mutual competitiveness through support and cooperation for mutual growth. In the agreement, it specifies the compliance with fair trade laws as well as fair trade guarantees and support for mutual growth.

In November 2020, to further spread the culture of fair trade and mutual growth, we held a ceremony where the tier 1 and 2 suppliers signed the fair trade and mutual growth agreement. The agreement specified the guarantee of fair trade between tier 1 and 2 suppliers, while allowing tier 2 suppliers to benefit from the mutual growth support program. In 2021, we will increase the number of suppliers subject to the agreement, while also allowing more tier 2 suppliers to receive support from the mutual growth support program.

Fair Trade and Mutual Growth Agreement Items

Compliance with fair trade laws

Guarantee of fair trade

Use of standard contracts

Support for mutual growth

Cooperation for mutual growth

Agreement period

Enhancement of ESG Management Level of Suppliers

ESG Risk Management of Suppliers

SK materials has organized environment and safety areas within the comprehensive assessment to prevent ESG risks of suppliers. We assess the level of ESG risk management of suppliers through the comprehensive assessment, and induce any improvement if found. We have established and operated an ESG risk assessment system that evaluates and manages not only the environmental and safety areas but also human rights, labor, and ethical management since 2021. ESG risk assessment is conducted based on the Supplier Code of Conduct to improve the level of ESG risk management of our suppliers through managing their improvement rate.

Supplier ESG Improvement Activities

SK materials is carrying out a range of support programs to improve the level of ESG performance of its suppliers. In 2020, we conducted Regular theme training sessions twice to spread major issues related to the business environment, and will hold four education sessions in 2021. In 2020, we set the theme of human rights and labor to educate our suppliers on the 'Anti-bullying in the workplace' law (May) and major amendments to labor laws (September). In early 2021, ESG and ethical management training was provided to the CEOs of 28 core suppliers of SK materials and its subsidiaries.

In addition, SHE compliance risk check and SHE consultation are conducted to check suppliers' compliance with the laws and regulations related to safety, health and environment. With the suppliers located overseas, we shared the advanced SHE management system through an online SHE seminar. In 2021, we plan to implement customized support programs for suppliers and to establish the environmental sub-committee in order to enhance the overall environmental management capabilities of suppliers and especially focus on conducting water use reduction programs.

ESG Risk Assessment Process for Suppliers



Management of a Sustainable Supply Chain

Mutual Growth Program

SK materials operates mutual growth programs to improve the long-term competitiveness of our suppliers. We operate three sub-committees (management support, SHE, and quality) for the systematic operation of mutual growth programs by 18 departments under sub-committees. In 2020, we focused on programs to improve the product quality and manufacturing capabilities of our suppliers, and to support their SHE and management activities. In addition, we developed 17 programs to be implemented in 2021, and established a detailed implementation system for the programs to provide customized support for suppliers of each business type and size. In 2021, we plan to expand the scope of suppliers participating in the programs and add advanced training courses to the existing programs. We will establish the environmental sub-committee and focus on activities to reduce the ESG risk of suppliers.

Fair Trade and Mutual Growth Conventions Ceremony



Mutual Growth Programs in 2020

Sub-committees	Program Name	Description
Management Support	Management Information Magazine	Mailing of the Management Information Magazine once a month
	Regular Theme Training*	May: Anti-bullying in the workplace law September: Major amendments to labor laws
	CEO Seminar	Management Capacity-Building Training
SHE*	SHE Compliance Risk Check	Support for SHE compliance check at workplace
	SHE Consulting	Support for on-site SHE improvement activities
	SHE Seminar	Advanced SHE management system training
	SHE Capacity-building Program for Suppliers at Yeongju-si Plant	Support for certification of Occupational Health and Safety Management System (ISO 45001), strengthening the management of pollutant emissions through facility improvement, assessment and improvement of hazardous risk operations, etc.
Quality	Quality Monthly Bulletin	Mailing of advanced quality control trend information once a month
	Quality Action Item	Implementation of quality management improvements
	Construction Quality Training	Training on working standards and quality standards

* Supplier ESG Improvement Activities

Support for Suppliers

Classification	Unit	2018	2019	2020
Amount of support for suppliers	KRW million	208.8	1,963.3	618.9

* In 2019, the amount of support was high due to infrastructure construction support activities such as construction of business partners' offices and maintenance buildings, and the expansion of waste storage facilities.

Fair Procurement

Fair Procurement of Raw and Subsidiary Materials

SK materials specifies fair procurement principles in the procurement regulations to prevent environmental and social problems that may occur in the supply chain of the procurement of raw and subsidiary materials, and to minimize negative impacts. In order to protect the human rights and local environment of residents in conflict areas such as the Democratic Republic of the Congo, the use of conflict minerals has been prohibited in principle. Suppliers have been requested to pledge to prohibit the use of conflict minerals, and trade will be suspended if a supplier refuses to comply with the pledge.

Expansion of Social Purchasing

To fulfill our social responsibility in the purchasing process, we have established the social purchasing principle in the purchasing regulation. The principle consists of green purchasing, and the purchasing of products and services from social enterprises. Green purchasing refers to procurement that includes evaluating whether products and services are certified by a certification system, validated by a national agency or a reputable organization, such as the environmental mark certification and the energy-saving mark certification. It can minimize environmental impact during product usage and reduce environmental restoration costs. Purchasing products and services for social enterprises means the purchase of products and services from suppliers certified as social enterprises by the Ministry of Employment and Labor. Such purchases can support vulnerable groups and vitalize regional economies. SK materials preferentially purchases the products and services from its suppliers in compliance with the principles of social purchasing to realize social value.

Establishment of a Safe Working Environment

Global Trend

The government is continuously strengthening SHE-related legal regulations, and social interest in SHE accidents is also growing. Global rating agencies and investors reflect the causes of accidents and efforts to mitigate them as well as occurrence of safety accidents in their corporate value assessment. This indicates the need for a company-wide SHE management system, safety accident prevention system, and effective emergency response system.

Opportunity

- Securing process safety throughout the value chain by strengthening and spreading safety expertise
- Enhancing brand value by minimizing damage in the event of industrial accidents and safety accidents
- Preventing loss of manpower and property by upgrading the safety management system

Challenge

- Increased compliance risk due to stricter regulations such as the Occupational Safety and Health Act
- Expanding the scope of professional capabilities required to prevent safety accidents according to various materials and advanced processes

Our Approach

SK materials' workplace safety management is an essential issue that is directly related to the health and safety of its employees, suppliers, and local communities, as well as the surrounding environment. SK materials has established a health and safety environment policy that puts people and the environment as the top priority, and we aim to achieve a 'Safe and Healthy Workplace and Green Corporate Culture' for safety management. SK materials operates the Technical Safety Committee within the BOD and the SHE Lab, a meeting hosted by the CEO, and has been building a system to prevent accidents and promptly respond by introducing innovative safety technologies.

Health and Safety Management



- Voluntary safety culture
- Settlement of PSM* operation
- Mutual growth of SHE with suppliers
- Establishment of safe working environment for workers
- Identifying and improving potential health risks
- Hazard and risk assessment for chemical substances

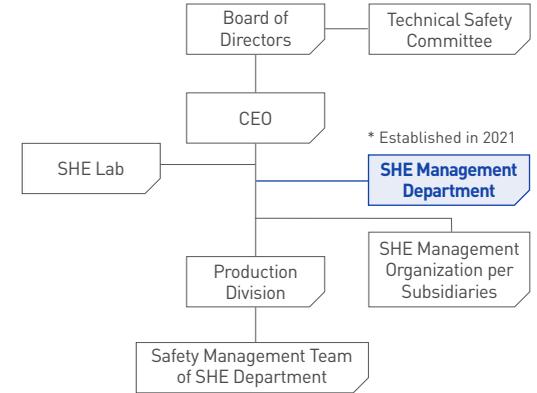
* PSM: Process Safety Management

Health and Safety Management System

Health and Safety Organization

SK materials identifies key safety tasks, the Technical Safety Committee within the BOD deliberates and decides on the tasks, and the achievements are discussed in the SHE Lab (Chair: CEO) every month. The selected safety and health activities are carried out by the Safety management team of the Production Division. In 2021, the Safety Management Team (Under the SHE department of Production Division) was established which acts as a SHE Control Center for the company and its subsidiaries to manage safety, health, environmental performance, set strategies and proactively respond to risks. The SHE operation plan is established and implemented at worksites, while the SHE committee is operated at the division/department/team/group level to enhance SHE leadership and execution.

Health and Safety Organization



Health and Safety Policy

SK materials has established and declared the SHE Policy with its subsidiaries, and disclosed the policy on its website after obtaining the signature from the CEO to show our commitment towards the health, safety and the environment. Building a safe and healthy workplace is our top priority and the first principle of the SHE policy, which specifies safety and health management not only for employees but for all stakeholders including communities, customers, and suppliers.

SHE Policy

SK materials pursues protection of humans and the environment as a top priority at every stage of its management activities to secure the trust of members and stakeholders and for SHE management, and actively implements the following:

1. Safe and Healthy Workplaces

SK materials' top priorities are safety, health, and the environment. It assesses the impact of business operations on safety, health, and the environment, and all employees strive to prevent industrial accidents from occurring.

2. Eco-friendly Corporate Culture

To become an environmentally friendly company, SK materials complies with all relevant laws and regulations and continues to improve its management system for safety, health, and environment.

3. Securing Trust through Compliance Management

The employees of SK materials participate in regular training sessions to maintain a high level of safety and environmental awareness, and to achieve SK materials' goals in safety, health, and environment protection.

4. Full Participation of Employees

All employees recognize SHE value improvement as a top priority and continue to strive to achieve their goals.

Establishment of a Safe Working Environment

Occupational Health and Safety Management System

In 2020, SK materials has completed the transition to ISO 45001 (Occupational Health and Safety Management Systems) certification including its subsidiaries. By doing this, SK materials has enhanced the level of safety management throughout the production process and is improving its health and safety management system through the virtuous cycle system of 'Plan-Do-Check-Action.'

ISO 45001 Certification Status (Scope: SK materials)

Classification	Worksite
SK materials	Yeongju-si
	Seoul (Office)

[Note] ISO 45001 Certification Status (Scope: all domestic production subsidiaries*)

Classification	Worksite
SK materials airplus Inc.	Ulsan-si
	Cheongju-si
SK trichem Co., Ltd.	Sejong-si
SK showa denko Co., Ltd.	Yeongju-si
SK materials performance Co., Ltd.	Asan-si

* SK materials renewtech will acquire the certification in Q3 2021.

ISO 45001 certification



Industrial Safety Index (Scope: SK materials)

Classification	Unit	2018	2019	2020
Industrial accident	Case	2	3	1
Injury ratio ¹⁾	%	0.32	0.45	0.14
Number of Deaths	Person	0	0	0
Number of Deaths (Suppliers)	Person	0	0	0
Death rate	%	0	0	0
Death rate (Suppliers)	%	0	0	0
LTIR ²⁾	Number of injuries per working hour	0.60	0.31	0.16
LTIR(Suppliers)	Number of injuries per working hour	1.18	0.51	0.74
OIFR ³⁾	Number of occurrences per working hour	0	0	0

1) Injury ratio: (Number of workers injured in industrial accidents) / (Total number of workers) × 100

2) LTIR: Lost-Time Injury Rate, (Number of Lost-Time Injuries) / (Total working hours) × 200,000

3) OIFR: Occupational Illness Frequency Rate, (Number of Occupational Illness) / (Total working hours) × 200,000

Emergency Evacuation Training



Enhancement of Health and Safety Management

IoT-based Process Access Control System

Due to the nature of its processes, SK materials handles a number of chemical substances. Workers must be aware of the safety information for all substances they handle, and wear protective equipment. In 2020, we set up an IoT-based process access control system to monitor in real time and respond quickly to any safety accidents. In addition, we have established a system that automatically analyze its CCTV video and detects the ones without protective equipment.

The system has a web-based process access control software with a database of work permits and dangerous areas. Workers must have identification tags with a signal generating function and have separate tags attached to chemical-resistant clothing, while installing AP* in the plant to track the location of workers and whether they are wearing chemical-resistant clothing. When an unauthorized worker, such as the ones failed to complete the process safety training, approaches the process area, or when a chemical-resistant clothing non-wearing worker approaches within the process area, relevant information is sent to the manager in the control room to take immediate action.

The ID tag is equipped with an emergency call request function so that the worker's information and location can be immediately transmitted to the control room to respond to rapidly respond to any emergency cases. In 2021, it is planned to establish a standardization model based on the results of the operation of the access control system in the process area, and to gradually expand the application of the system.

*AP: Access Point, a device that receives tag signals

Operator Safety Monitoring

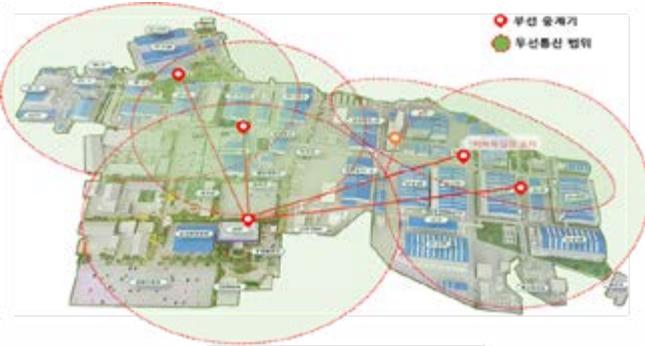


Establishment of a Safe Working Environment

Establishment of Wireless Gas Detection System

In 2020, the company established a wireless intrusion detection system that can monitor gas concentration in real time to prevent suffocation and HF contact accidents caused by hazardous gas leaks in enclosure space. As a result, the oxygen concentration, HF leakage in enclosure space and situation information are delivered to the comprehensive disaster prevention room and each control room through repeaters in the event of abnormalities. The wireless gas concentration detection system further strengthens our gas leak safety accident prevention system and enables us to respond quickly to accidents.

Wireless LoRa* Network



Wireless Gas Detector
(For HF hazardous workplaces)



Wireless Repeater



Comprehensive Disaster Prevention Center

* LoRa: Long Range, Wireless communication method capable of long-distance data transmission

Safety Check of Wireless Gas Concentration Detection System



Advancement of AI and Video-based Vehicle Speed Detection System

To prevent accidents caused by driving in the plant, SK materials plans to build a VSDS (Vehicle Speed Detection System) that automatically detects the speed of vehicles based on CCTV video information and determines the speeding. Based on its AI and CCTV video information, we plan to continuously develop and innovate on SHE systems.

2020 Workplace Safety Management Enhancement Activity

Development and Application of DT Solution

- IoT-based process access control system
- HF contact prevention system
- Prevent the suffocation-related accident in enclosure space
- Rain water pollution wireless detection system
- Smart safety bar for working at heights
- Improvement of AI and video information system

Advanced Process Safety Management

- Systemizing safety evaluation procedures in case of any process change
- PSM diagnosis and improvement (76 cases discovered and improved after external assessment)
- Expansion of PSM member training (process and work risk assessment training, etc.)
- PSM self-audit

Advanced Safety Audit

- Establishment of workplace audit plan (including domestic subsidiaries and overseas subsidiaries)
- Audit and reporting
- Identification of improvement tasks and establishment of implementation plans

Establishment of a Safe Working Environment

Spread of Safety Management Culture

SK materials strives to raise safety awareness and safety culture among all employees. We added the 'SHE Management' tab on the company website to expand our safety communication platform, share any safety accident cases of other companies to raise the awareness of work safety. Any safety-related opinions are collected through 'SHE Box,' and we design customized safety training based on these gathered suggestions.

In 2020, we provided regular safety and health education for employees of 25 sub-departments of SHE department, production division, and CRD division which are closely related to safety management for two-hours a month. In addition, in order to enhance the specialty of safety management, we provide 16 hours of manager training course a year to 124 safety managers, and a safety coaching instructor qualification course was newly established in 2020 for 30 employees, and provided 18 hours of training course per employee for a year.

In 2020, we introduced a 'Safety Talk' system that mandates the employees to discuss on safety before any meetings begin. The company is raising the awareness of safety and setting a culture where it lays the safety as a top priority. Safety culture shall not be limited to the workplace only, but will be embedded in the daily lives of employees by encouraging them to conduct BBS (Behavior Based Safety) and risk prediction activities, and organizing internal firefighting competitions.

Health Management Activities for Employees

SK materials regularly checks the health of its employees and operates programs to promote their health. We evaluate health-related risks at worksites and carry out preventive activities. We assess and manage the working environment for our workplaces, our subsidiaries and suppliers. In addition to general check-ups for employees, we regularly monitor and conduct risk assessment for the diseases that may be caused by repetitive work such as that of brain-, cardiovascular- and musculoskeletal-related diseases. Once the occupational disease is observed, we provide counseling as well as treatment for the employees.

Body Fat Improvement Event Poster

포상계획
아직 마음(몸)의 준비가...
지금... 배가 더 나왔잖아? 진심?

평가 (목표설정 감소율)	포상금액	포상내용	시행내용
최고 120Health 점	40만원		1회/월, 2회 이상 측정 참여(최초/최종 포함) · 최종측정 가장한 점수 : 2020. 12. 30 · Health왕 상금 조인 발급
20%이상	20만원		· 개별 직원: 건강관리대상 참여금 10000 원 · 최초측정 결과 비현, 고도비만 · 측정 결과자: 건강상 x 10% 가감 (ex. 건강상 13% 경우, 13x1.1=14.3%만큼 점수 반영)
15%이상	10만원	상복귀	· 기타 상복귀금
10%이상	5만원		· 측정기간 기준점: -0.5점/30일 상복 (11점~0.5, 10점~1, 9점~1.5)
5%이상	2만원		· 최종측정: 2020. 09. 18일 하관 측정일 경우, 대상 제외

Healthcare Program for Employees

Working Environment	Working Environment Measurement	<ul style="list-style-type: none"> Status of chemical usage of each plant and MSDS(Material Safety Data Sheet) management Regular measurement of working environment (once a half-year)
	Ventilation System Check	<ul style="list-style-type: none"> Local Exhaust Ventilation Check (once a year)
Prevention of Diseases	Prevention of Hearing Loss	<ul style="list-style-type: none"> Diversifying of the size of hearing protection device Management training for noise-related hearing loss prevention
	Prevention of Musculoskeletal Diseases	<ul style="list-style-type: none"> Regular investigation on any musculoskeletal factors (once every 3 years) Investigation of symptoms of musculoskeletal disorders (once a year) Classification of employees subject to monitoring and management, and operate prevention programs
	Prevention of Brain and Cardiovascular Diseases	<ul style="list-style-type: none"> Prevention and management education for brain and cardiovascular diseases (once a year) Cardiopulmonary resuscitation training and on-site installation of AED Operation of screening program
Medical Examination	Legal Health Checkups	<ul style="list-style-type: none"> General/special medical examination (once a year) Health check-up before and after joining the company (if any) Job Stress Test Evaluation of risk for brain and cardiovascular diseases Follow-up inspection Operation of screening program
	Welfare and Benefit	<ul style="list-style-type: none"> Follow-up for Early Prevention of Occupational Diseases (for HF, NF,) General check-up for employees' spouses (once a year, and biannual check for age 36 or more spouses)
Health Promotion	Health Room	<ul style="list-style-type: none"> Medical professional (nurse) staffing Physical therapy room and exercise instruction room First aid/medicine/on-site first aid kit Simple examination and health consultation
	Health Promotion Program	<ul style="list-style-type: none"> Non-smoking clinic 10,000 steps per day Flu vaccination support for employees and their families

SUSTAINABILITY FOUNDATION

The Sustainability Foundation encompasses SK materials' activities and plans to fulfill its social responsibilities and create diverse values, in general areas that are not selected as key areas in the Materiality Assessment.

It covers three areas: Environment, Social, and Governance. SK materials will continue to pursue ESG management as the basic value of corporate management.



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ENVIRONMENT

SOCIAL GOVERNANCE

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Environmental Management System

Environmental policy

SK materials has established and declared the SHE Policy* with its subsidiaries and disclosed the policy on its website. We believe that preserving the planet and creating a better environment for local communities are one of the biggest corporate responsibility and thus have set the top priority to pursue a green corporate culture. Our SHE Policy specifies that SK materials will endeavor to use resources efficiently, prevent environmental pollution, and the environment greener.

* See p.30 for more information

Organization of Environmental Management

As the business scale expands and SHE risk management becomes ever more important, SK materials operates a CEO-level meeting group to discuss major environmental issues such as climate change response and water resource management to check the performance of environmental tasks. In addition to the ESG organization and SHE departments at worksites, in 2021 SK materials organized the SHE Management Department to establish company-wide environmental management strategies and goals, identify SHE risks, and enhance the environmental capabilities of its employees.

Environmental Performance Assessment System

SK materials establishes environmental KPIs for divisions and each departments to improve the overall environmental performance, and has selected 'Performing and Achieving Environmental Improvement Tasks,' 'Improvement of Environmental Performance Indicators,' and 'Reduction of Energy and GHG' as key tasks. The degree of achievement of the tasks is evaluated annually, and the results are used as an indicator for assessment and compensation of management and employees. For any executives and managers of organizations who are directly related to environmental performance such as the ones at SHE management office and the environmental management team, their environmental performance is weighted more during the evaluation, and link it to the degree of compensation to motivate them to gain greater environmental performance.

SK materials' management policy is to 'Pursue a Green Corporate Culture' to become a sustainable company. To continuously improve our environmental performance, we have selected a number of target indicators on waste recycling rate, pollutant emissions, and GHG emissions. We plan to establish and apply a systematic performance management system.

Environmental Management System

SK materials has acquired ISO 14001 certification, an international standard for environmental management, and maintains its qualifications through renewal screening. Not only Yeongju-si plant and Seoul office but also its subsidiaries have acquired the certification, and SK materials has established a systematic environmental management system of overall Value Chain by providing support to core suppliers in acquiring ISO 14001 certification.

ISO 14001 Certification Status (Scope: SK materials)

Classification	Worksite
SK materials	Yeongju-si
	Seoul (Office)

[Note] ISO 14001 Certification Status (Scope: all domestic subsidiaries)

Classification	Worksite
SK materials airplus Inc.	Ulsan-si
	Cheongju-si
SK trichem Co., Ltd.	Sejong-si
SK showa denko Co., Ltd.	Yeongju-si
SK materials renewtech	Ulsan-si
SK materials performance Co., Ltd.	Asan-si

Environmental Management Audit

SK materials conducts regular internal and external audits to manage the Environmental management system as well as the internal environmental regulations and procedures of its workplaces and the workplaces of its subsidiaries. The environmental management performance and the operation of the Environmental management system are evaluated by external institutions every three years. An internal audit is conducted to verify qualifications for ISO 14001 by a TF team with members and executives who have obtained internal audit qualifications.

In addition, regular SHE audits are conducted every year to check the compliance of legal requirements and internal regulations that are related to the environment, such as that of air, waste, water quality, soil, and chemicals. In 2020, an offline regular SHE audit was conducted for domestic workplaces and subsidiaries, and a written audit for overseas corporation due to COVID-19.

Environmental Management System

Environmental Compliance

To comply with national environment-related laws such as that of the Clean Air Conservation Act and the Water Conservation Act, SK materials has established internal environmental impact assessment procedure and management system for clean air, water quality, chemical and waste. SK materials has set strict internal environment management standards, above the level required by national laws, to minimize the impact on the environment and to detect and respond to any inefficient pollutant prevention facilities.

Violation of Environmental Regulations

Classification	Unit	2018	2019	2020
Fine	Case	1	0	0
	Amount	KRW million	4	0
Administrative Fines	Case	1	0	0
	Amount	KRW million	6	0

Environmental Training

SK materials has provided training for technical experts and managers specified in environmental acts such as the Clean Air Conservation Act, the Water Conservation Act and the Toxic Chemicals Control Act to foster environment management professionals, while providing training for all employees on the risk factors and countermeasures of hazardous chemicals. In addition to the legal trainings, we encourage employees to raise their environmental awareness training investigation of environmental accident, informing GHG related policies; thus to manage environmental performance in general. We also provide ISO 14001 auditor training for employees to secure their expertise in the internal audit of the environmental management system. Separate safety and health environment board is under operation to share any environmental issues such as that of enactment and revision of environmental laws and the results of environmental impact assessment.

Environmental Training

Classification	Unit	2018	2019	2020
Air Environmental Technician	Person	6	3	5
	Hours	168	84	140
Water Quality Environmental Technician	Person	2	4	6
	Hours	56	112	168
Training for Hazardous Chemical Substance Handling Workers	Person	484	481	331
	Hours	968	962	662
Hazardous Chemical Substance Technician and Supervisor	Person	16	38	24
	Hours	256	608	384
Hazardous Chemical Substance Manager	Person	170	117	293
	Hours	2,720	1,872	4,688
ISO Internal Auditor	Person	-	15	-
	Hours	-	240	-
Total	Person	678	658	659
	Hours	4,168	3,878	6,042

Training for Hazardous Chemical Substance Handling Workers



Pollutants

Water Pollutant Management

SK materials has set internal management standards, stricter than those of the national laws to minimize the generation of water pollutants throughout our production process. In particular, we set the level of pollutants Chemical Oxygen Demand (COD) and Total Nitrogen (T-N) as below 80% of permitted amount under the Water Conservation Act. All of the water used in our domestic production processes flows into the sewage treatment facility in Yeongju-si for treatment after going through our own wastewater treatment, and is discharged to the nearest river. Rainwater discharged from the plant area is collected in a storage tank to check for contamination, and then is processed and discharged through a non-point pollution reduction facility. Water discharge facilities, such as rainwater ditches and sewage treatment facilities, are inspected daily, and the concentration of water pollutants in the discharge water is also measured daily.

Major Water Pollutant Emissions

Classification	Unit	2018	2019	2020
COD	Emissions Tons	7.2	9.9	8.6
	Intensity Tons / KRW 100 million	0.00162	0.00217	0.00166
T-N	Emissions Tons	5.0	5.4	4.7
	Intensity Tons / KRW 100 million	0.00111	0.00118	0.00090

SK materials recognizes managing Atmospheric atmospheric and Water water pollutant generation as an activity that should go beyond the compliance; and thus we extends exert further to fulfil our environmental responsibilities. Strict internal management standards are established to comply with legal standards, and efforts are made to continuously reduce the intensity of major pollutants. In addition to pollutant management activities, 'green worksite' activities such as the reducing GHG emissions and water use, promoting water recycling, and the managing waste generation. pages 22-25.

Air Pollutant Management

To manage the emission of air pollutants such as nitrogen oxides (NO_x), sulfur oxides (SO_x), and dust, SK materials sets internal management standards to 80% or less of the permitted emission levels under the Clean Air Conservation Act. SK materials has established the internal process to identify the cause and implement corrective actions if air pollutants' emission level is higher than its internal standard. We comply with legal standards and conduct regular and occasional measurements when necessary to monitor the treatment efficiency of pollutants.

Major Air Pollutant Emissions

Classification	Unit	2018	2019	2020
Nitrogen Oxide (NO _x)	Emissions Tons	4.8	9.7	5.0
	Intensity KRW 100 million	0.00107	0.00213	0.00096
Sulfur oxides (SO _x)	Emissions Tons	1.4	0.7	0.3
	Intensity KRW 100 million	0.00031	0.00014	0.00006
Dust	Emissions kg	0.6	0.6	0.4
	Intensity kg / KRW 100 million	0.00013	0.00013	0.00008

* The concentration of nitrogen oxide and sulfur oxide is measured once or twice a year, and the annual emissions vary depending on the measurement period.

Water Pollution Measurement



Hazardous Chemical Substances

Integrated Chemicals Management System

SK materials has established and operated an integrated chemicals management system to minimize the environmental impact of hazardous chemical substances in its products and to manage them according to the national laws and the company's internal regulations. When purchasing products from partners, a chemical substance is procured through the electronic purchasing system. The department that procures the chemical substance directly registers the MSDS (Material Safety Data Sheet) or chemical information in the system. We only purchase substances that have been verified and confirmed by the Environmental Management Team and make sure that all the procured chemicals are managed through the integrated chemicals management system. We provide information on potential harm and manuals for safety use to customers when delivering products.

Storage and Transport of Hazardous Chemical Substances

SK materials is committed to prevent accidents during the storage and transportation process through the enhanced management of facilities and transportation vehicles that handle hazardous chemical substances. SK materials conducts regular inspections (external inspections once a year; self-inspection on a daily-, weekly- and monthly-basis). SK materials monitor the compliance of transport vehicles at all times when loading and unloading substances for the safety of chemical substance transporting vehicles. To raise the awareness of the importance of managing hazardous substances to drivers, two categories of inspection checklists have been established; 'Three Strikes Rules' that regards transportation vehicle as disqualified if a violation case is witnessed three times, and 'Take Actions within One Month' when it is necessary to take adequate measures such as replacing old tires of the transport vehicle to new ones.

In particular, an eye movement detection sensor as a drowsy driving preventive measure, a hazardous gas detection, and GPS system have been installed in transportation vehicles that carries Hydrogen Fluoride (HF) substance. Any transporting vehicles passing through the downtown area of Yeongju-si are guided by convoy vehicles.

SK materials has a system to ensure safety in the entire process of procuring, storing, processing, transporting, and disposing of hazardous chemical substances. SK materials operate a system that evaluates the risks of chemical substances procured and exported through the integrated chemical management system and verify compliance with legal requirements. Inspection activities are routinely carried out to identify harmful risk factors in the storage and transportation process. We recognize the seriousness of environmental accidents caused by the leakage of hazardous chemical substances and strive to prevent and minimize the damage.

SK materials' employees are responsible for transporting products to customers using SK materials' vehicles, and they are required to participate in emergency response trainings conducted regularly.

Vehicle Inspection Items when Loading and Unloading Hazardous Chemical Substances

Subject to Three Strike Rule



- Disaster prevention equipment
- Self-inspection log
- Disaster prevention card
- Transport plan
- Personal protective equipment
- Toxic substance indication status

Improvements Required within One Month



- Completion of legal education on harmful chemical substances
- Material information data (MSDS)
- Emergency response manual
- Tire maintenance
- Material leaks

Eye Movement Detection Sensor



Toxic Gas Detector for Vehicles



Emergency Response Training for Transport Vehicle Drivers



Convoy for Hydrogen Fluoride Transport Vehicles



Hazardous Chemical Substances

Environmental Accident Response System

SK materials understands the seriousness of hazardous chemical leaks due to fires, explosions, and natural disasters. We are putting efforts to prevent and deal with chemical accidents by establishing an early detection system and minimizing the damage as well as the occurrence of accidents through Identifying vulnerable areas and taking appropriate measures. Gas detectors are installed in storage facilities and outside the plant. Discolored or stained leaking mark are checked thoroughly to locate the leakage in all facilities and pipes of the plant. Shielding systems and water curtains are installed in the facilities to minimize damage. The Emergency Operations Center is also operated 24/7 to ensure a prompt response. In 2020, we established an emergency spray system in the deposition gas process. The system is designed to automatically operate a spray pump when hazardous chemicals are detected through gas detectors to minimize the spread of hazardous chemical substances in the event of an emergency.

Emergency Sprinkler System



Building the Safety Cooperation System for Local Communities

SK materials responds to environmental accidents by cooperating with local communities. We have established an emergency contact system (Hot Line) with local authorities, such as the local city hall, fire station, police station, hospital, and air force unit, and share Security cameras and automatic gas alarm that can also monitor and control the plant with the city hall control center. Gas detector monitors and electronic displays are installed in three places including the city hall control center and surrounding villages so that members of the local community can monitor the measurements of gas detectors installed outside the plant in real time.

To enable local residents to respond to accidents when happen, we installed wind vanes nearby villages, provided safety gear and accident response guidebooks, and conducted joint evacuation drills at least once a year. In 2020, joint drills were not conducted due to COVID-19, but a safety examination briefing session was held at the city council, hosted by the external institution (Korean Institute of Hazardous Materials). At the briefing in October 2020, Yeongju-si City Council members were invited, and the results of safety assessments conducted by the external organizations as well as improvement plans were shared.

Community Briefing



ENVIRONMENT **SOCIAL** GOVERNANCE

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Respect for Employees

Direction of Respect for Employees



Organizational Culture

SK materials has defined its management goal as 'Employee Happiness.' SK materials believes that it can grow into a sustainable and respected company when happy employees pursue for the happiness of society with its power of unity. If the company pursues the happiness of its employees, they can take more pride in the company, align their personal growth with that of the company to find meanings in work, and ultimately form a virtuous cycle of Employee Happiness. SK materials has established SK materials Happiness 112* with three goals: respect for time, respect for work, and respect for people to pursue Employee Happiness.

* SK materials Happiness 112 (Happiness 112: 12 promises to work(1) happily)

SK materials has set three directions to ensure the respect for employees and carried out related activities based on the belief that employees are the driving force for sustainable corporate growth. As more subsidiaries are incorporated through mergers and acquisitions, new employees with more diverse backgrounds are joining the company. SK materials strives to create an organizational culture in which diverse employees can respect each other and feel a sense of unity.

Talent Recruitment and Training

Recruitment

SK materials respects the diversity of all employees and ensures that there is no discrimination based on factors such as gender, race, age, gender identity, academic backgrounds, disability, religion, political orientation, or social status during the recruiting process. Such a policy is specified in the Employment Rules. We are fulfilling our corporate social responsibility by taking affirmative actions for the members of socially vulnerable groups, such as people with disabilities and patriots and veterans. We evaluate the achievements, abilities, and competence of applicants when hiring and seek for talents who 'pursue the goal of SUPEX* with voluntary and motivational attitude and independent problem solving abilities.'

* SUPEX: Stands for 'Super Excellent Level,' which means the highest level attainable by human ability

Qualities We Seek

Confidence in Management Philosophy



Sustainable Happiness of SK People and Stakeholders with The Culture of SUPEX Quest through VWBE

VWBE
Voluntarily, Willingly, Brain Engagement

SUPEX
Super Excellent, the highest attainable level of human performance

Pae-gi



Pae-gi means a spirit that challenges and overcomes hurdles in one's work. People who possess Pae-gi are self-motivated; they raise issues, challenge high goals, and break existing frameworks through bold execution. In the process, they strive to develop the necessary competencies and achieve higher results by actively communicating with others.

Employees¹⁾

(Unit: person)

Classification		2018	2019	2020
Total number of Employees	Total	697	738	794
	Male	626	647	693
	Female	71	91	101
Permanent Employees	Total	689	709	764
	Male	618	625	667
	Female	71	84	97
Contract Type	Total	8	29	30
	Contract Workers	8	22	26
	Female	0	7	4
Executives	Total	13	15	17
	Male	13	15	17
	Female	0	0	0
Position	Total	169	181	230
	Supervisory position ²⁾	150	157	195
	Female	19	24	35
Team members	Total	515	542	547
	Male	463	475	481
	Female	52	67	66
Socially Vulnerable Persons	Disabled Employees (Proportion ⁴⁾)	11(1.7%)	21(3.8%) ³⁾	21(3.5%) ³⁾

1) Based on reported employees

2) Employees above managerial level

3) Including members of its disability-friendly workplace subsidiary, Happy Companion corporation

4) Calculation based on special levy for disabled employment

Respect for Employees

Job Creation

Classification	Unit	2018	2019	2020		
New Recruits	Total	Person	85	85	113	
	Gender	Male	Person	71	60	95
		Female	Person	14	27	18
	Age	Below 30	Person	39	49	24
		30-50	Person	41	33	78
		Over 50	Person	5	3	11
Turnover Rate*	Total	%	6.0	4.5	5.5	
	Turnover Type	Voluntary	%	5.9	3.8	4.8
		Other**	%	0.1	0.7	0.7
Average length of service	Total	Year	6.2	6.5	6.7	
	Male	Year	6.2	6.7	7.0	
	Female	Year	5.5	4.9	5.3	

* Excluding the number of people moving to investment companies

** Retirement, expiration of contract period, etc.

Employee Training

SK materials operates systematic education and training programs to foster global talent and build capacity of employees. Education and training programs are provided according to the level of knowledge and competence required for particular duties, and each employee voluntarily participates in training programs based on their annual course plan. We endeavor to create a culture of voluntary learning environment by utilizing 'mySUNI,' SK Group's learning platform. Along with capacity-building activities such as AI/DT literacy education that are conducted to foster leaders in the era of Digital Transformation (DT), we are running education sessions regarding the importance of creating social values and happiness for the sustainable growth of employees of SK materials.

Employee Training System



Employee Training Time and Expenses per Employee

Classification	Unit	2018	2019	2020
Training time per employee	Hours	45.1	48.4	201.9
Cost per employee	10,000 KRW	102	118	174

* In 2020, contactless learning time increased significantly with the launch of SK Group's learning platform mySUNI.

Employee Training Program

Leadership	Leadership Program	<ul style="list-style-type: none"> ELP(Executive Leadership Program) FLP(Future Leadership Program) HLP(HIPO¹⁾ Team Leader Program)
	Workshop	<ul style="list-style-type: none"> Executive Team Leader Group Leader
SK Values	Training for new executives and team leaders	<ul style="list-style-type: none"> Leadership and management capacity-building training to drive change
	Training for new employees	<ul style="list-style-type: none"> Training to secure a sense of belonging to SK group
	SKMS ²⁾ Workshop	<ul style="list-style-type: none"> Increase understanding and execution of SKMS
	Onboarding Program	<ul style="list-style-type: none"> Understanding the Company and Its Business Environment
Job Competencies	Mobile Academy	<ul style="list-style-type: none"> Mobile applications and groupware with contents for SK group's core values and self-development
	Competency school	<ul style="list-style-type: none"> Flipped Learning³⁾ on group-level job functions, case studies and practice by business areas
	Technical and job competency training	<ul style="list-style-type: none"> Basic training in semiconductor industry and engineering Engineering expert program Technical field expert training program Job training specialized for each organization
Global	Language Education	<ul style="list-style-type: none"> Foreign language training
	Global competence training	<ul style="list-style-type: none"> Soft Landing program for Expatriates or candidates in overseas subsidiaries

1) HIPO: High Potential

2) SKMS: SK Management System

3) Flipped Learning: A type of blended learning in which learners complete readings at home and engage in discussion, participation, and work-study program during class time

Respect for Employees

Employee Survey

SK materials semi-annually conducts the Culture Survey and the Happiness Survey to assess the level of an employee's happiness/satisfaction and to evaluate its corporate culture. The Culture Survey consists of 51 questions that aims to analyze the level of happiness and satisfaction, satisfaction level of corporate culture and the degree of social value creation. 680 (about 88%) of all 725 employees, participated in the Culture Survey in 2020, and the overall score reached 83 points with an increase of 14 points in comparison to year 2019. Scores improved in all areas, and the significant improvements were apparent in the areas of motivation and execution parts of corporate culture question.

In 2020, the validation and the effectiveness of Happiness 112 campaign was reassessed by adding some questions from Happiness Survey to the Culture Survey. From the Culture Survey, conducted in September 2020, we witnessed the increase in scores from every question, extracted from Happiness survey that was also conducted in March. In particular, substantial improvements were made in the sectors of 'Use of respectful words, formal positions and titles' and 'No contact after working hours.' Long-term improvements are being sought through steady activities for items with lower improvement compared to other items.

SK materials has identified problems based on the survey results and collected feedback, and carried out a number of improvement activities within each organization, including a workshop for female employees and a change management workshop. We will continue to identify satisfaction levels in each area through employee satisfaction surveys, and engage in organizational culture improvement activities that produce substantial results for employees.

Culture Survey Result

(Unit: points)

Classification	2018	2019	2020
Score	69	69	83

Communication Channel and Programs

SK materials plans and operates a number of communication channels and programs to establish a pleasant organizational culture and promote effective communication among the employees. The goals are to achieve interactive rather than simple one-way communications between SK materials and its employees, and aims to create an environment in which employees can freely express their own opinions. In 2020, contactless and online communication channels were operated in response to COVID-19 pandemic.

Communication Channel and Program

Communication Channel and Program Name	Description
Intranet homepage	<ul style="list-style-type: none"> • Operation of anonymous suggestion and inquiry boards, SHE suggestion box • Analysis of employees' opinions by gathering 'likes' and the 'comments' of the online posts
Late-night radio show, 'To You, Who Forget Your Night'	<ul style="list-style-type: none"> • Communication with employees working the night shift
YouTube live show, 'Happiness on Air'	<ul style="list-style-type: none"> • Sharing company's strategic direction (hosted by the CEO)
Facebook page, 'Salon de FAM'	<ul style="list-style-type: none"> • Sharing happy moments of the daily lives of employees via photos, videos, etc.

Online Happiness on Air Year-end party



Improving Quality of Life

Work and Life Balance

SK materials operates and monitors systems and programs that can promote a better work and life balance and induces the improvement of the quality of life for employees. To comply with Act on Equal Employment and Support for Work-Family Reconciliation, revised in 2019, SK materials increased the parental leave to 10-days while providing fewer working hours up to 35 hours per week to parents during child-rearing period.

Furthermore, SK materials operates a selective working hour system to firmly establish the system of flexible working hour and an overtime monitoring system. Managers of each departments with excessive overtime working hours are asked to internally re-arrange the working hours of employees and provided with training course to establish performance-oriented evaluation culture rather than its working hours. We strive to identify areas of work that can automated and develop related systems to reduce the physical burden faced by employees.

Use of Parental Leave

Classification	Unit	2018	2019	2020
Employees who took parental leave	Male Person	0	6	4
	Female Person	2	2	8
Employees who returned from parental leave	Male Person	0	3	6
	Female Person	1	3	3
Return rate*	Male %	100	100	100
	Female %	100	100	100

* [Number of returning employees from parental leave in reporting year] / [Expected number of returning employees from parental leave in reporting year] X 100

Respect for Employees

Welfare and Benefits

The company operates various welfare and benefit systems to support the health and happiness of our employees. We gather opinions from our employees on our welfare and benefits systems through various channels. In 2020, we improved welfare and benefits systems by introducing the Influencer* system. The influencer system aims to select 'Influencers' from our employees to have them participate in the practical discussion process in order to reflect employees' opinions in the planning and improvement of the company's major systems and programs. In 2020, we have reformed about 10 welfare and benefits systems based on these opinions, which included changing our approach to housing support and raising the limit on housing loans. We will continue to further upgrade our welfare and benefits systems by reflecting the opinions of our employees, while focusing on providing support to resolve problems that are unavoidable due to regional characteristics.

* Influencer: Refers to 'an employee leading changes within an organization,' deriving from the original meaning of a person who has a great influence on SNS.

Key Welfare and Benefit Systems

Area	Description
Healthcare	Health checkup (including spouses), group accident insurance (including spouses and children)
Housing support	Housing loans, support for corporate housing when assigned to work in a different location
Home and childcare support	Children's school expenses, congratulations and condolences leave, expenditure for congratulations and condolences
Hobby and leisure support	Support fund for club activities, vacation expenses, resort benefits
Other	Happiness point (cafeteria benefit; given by points, equivalent to cash), Cell-phone reimbursement, long-term service rewards

Welfare and Benefit Expenses

(Unit: KRW million)

Classification	2018	2019	2020
Expenses	8,803	11,913	12,449

Respect for Human Rights and Diversity

Setting Human Rights Policy

In March 2021, SK materials established a human rights policy that employees must comply with to prevent human rights violations by stakeholders in business relationships, such as employees and suppliers. The company supports all standards and laws in the area of labor and human rights, and the related international organizations and bodies, including the Constitution of the Republic of Korea, the UDHR¹⁾, the UNGPs²⁾, the ILO³⁾, and the OECD Due Diligence Guidance for responsible Business Conduct based on the human rights policy. In February 2021, SK materials joined the UNGC⁴⁾ and declared its compliance to the ten principles of governing human rights, labor, etc.

- 1) UDHR: Universal Declaration of Human Rights
- 2) UNGPs: UN Guiding Principles on Business and Human Rights
- 3) ILO: International Labor Organization
- 4) UNGC: UN Global Compact

Detailed Principles

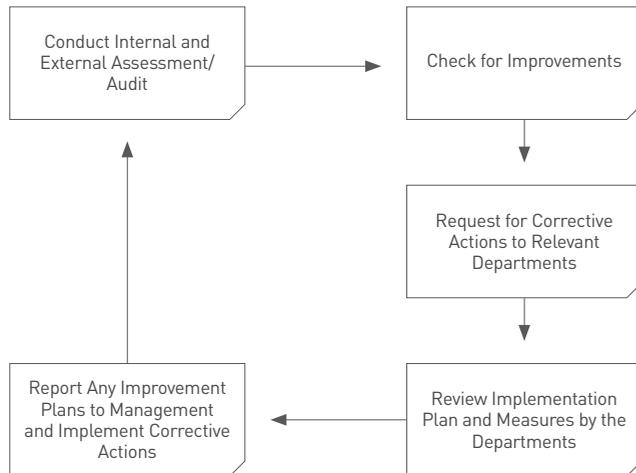
Area	Policy
Respect for human rights	SK materials shall respect all of its employees as equal beings and endeavor not to compromise human rights.
Working Environment and Safety	SK materials shall comply with international standards, relevant statutes, and internal regulations on the working environment to create a pleasant working environment and prevent safety accidents.
Prohibition of Forced Labor	SK materials shall respect employees' free will against mental and physical restraint and shall not require the transfer of government-issued identification cards, passports or work permits during the term of employment.
Prohibition of Child Labor	SK materials shall not employ children or adolescents under 15 years of age, shall not allow children or adolescents under 18 years of age to be engaged in dangerous or harmful work and shall comply with the relevant laws and regulations on child labor in all regions in which we operate.
Working Hours Compliance:	SK materials shall comply with working hours regulations of the regions in which we operate in terms of regular, overtime, and holiday work.
Wage and Welfare	SK materials shall pay more than the minimum wage prescribed in the regions in which we operate, along with the payroll statement.
Prohibition of Discrimination	SK materials shall respect the diversity of all employees, and ensure that discrimination based on factors such as gender, race, age, gender identity, religion, or social status does not occur in recruitment, wage, promotion, and other personnel processes.
Freedom of Association	SK materials shall guarantee freedom of association in accordance with labor relations laws and regulations on labor relations in the regions in which we operate. Employees shall not face unfair treatment shall not be applied on the grounds of membership or activities of trade unions.
Freedom of Expression	SK materials shall preserve the ones' Freedom of Expression
Personal information protection	SK materials shall protect the personal information of stakeholders in accordance with local laws and regulations to protect human rights of all stakeholders. The company shall not use personal information for any purpose other than the reason for which it has been collected without the consent of the person concerned.

Respect for Employees

Human Rights Risk Management Process

SK materials operates a human rights management process to prevent human rights violations of stakeholders during its management activities. Evaluation and audit are conducted based on its internal human rights policies, and the established improvement plans are implemented once they are carefully reviewed by the management team. In addition, the implementation of the action plan is continuously monitored and followed-up until the corrective action is made or until it meets the certain standards.

Human Rights Risk Management Process



Human Rights Violation Prevention Program

SK materials conducts theme-based regular education programs every year to prevent human rights violations. In 2020, we provided online training programs on 'Sexual Harassment Prevention,' 'Education for Disability Awareness in the Workplace,' 'Personal Information Protection,' and 'Prevention of Workplace Harassment' for all employees. In addition, we established 'Happiness 112' principles that include prohibition of verbal abuse, abusive language, and sexual offense to prevent human rights violations, and the implementation of such principles is assessed through the employee surveys.

Inclusive Working Environment

SK materials recognizes that the innovation of an organization is arose from the diversity of our employees, and thus put efforts to enhance the diversity within the organization. We create a female-friendly working environment to enhance the gender diversity and regularly hold workshops for female employees to gather their opinions. In 2020, we held workshops twice to identify the factors that threatens gender diversity within the company, and based on the findings, we established working environment improvement action tasks to make a more inclusive working environment.

In addition, we are establishing the management system that prevents career interruption of our female employees and provides support for their growth as leaders. We also provide the parental leave and the leave for infertility treatment that are in accordance with the relevant laws, as well as the female-only resting place. In 2021, with an increase of one female executive and four female team leaders, the proportion of female managers have increased by five times more, and we will enhance the system and expand our related support activities to create a female-friendly workplace.

Operation of 'Happy Companion' Subsidiary-Disability-Friendly Workplace

SK materials operates the 'Happy Companion Co., Ltd.,' its subsidiary to provide stable jobs for employees with disabilities and to preserve the diversity of the entire company. As of the early 2020, a total of 11 disabled employees (7 severely disabled) are managing the cleaning of indoors and outdoors of the company, in-company laundry services, and postal services. SK materials is endeavoring not to limit the business scope of 'Happy Companion.' SK materials seeks to find areas where disabled employees can provide appropriate welfare-supporting service for the company and therefore increase the overall employment of workers with disability.

Work at Happy Companion



Social Contribution

Social Contribution System

Under the slogan 'Share Happiness and Grow Together with Local Communities,' SK materials strives to contribute to society by selecting key social value strategies that solves social problems, fosters future talents, and sharing happiness with others.

In particular, we take a sustainable management measure to create social value based on a local environment of each workplace and establish and conduct various social contribution activities to secure the trust and support of stakeholders. After a close and in-depth discussion with the ESG Management Team, the Business Management & Support Department arranges all the social contribution activities conducted at Yeongju-si community. Major social contribution activities are organized after review and approval from the CEO and the BOD.

Social Contribution System



SK materials promotes various social contribution activities to create a sustainable and happy society. We contribute not only to the local economy, but also to building a society in which everyone is happy and grows together. We will continue to grow together by sharing happiness with the local community with the belief in a virtuous cycle in which both of our social value and economic performance will again become the groundwork for the company's development.

Solving Social Problems

As a cooperative partner of the local community, SK materials strives to identify and solve the social problems faced by local residents. In 2020, we set and promoted the establishment of a Social Safety Net of vulnerable groups in the community as a priority and major task, and we plan to expand the scope our activities to the discovery and fostering of young entrepreneurs in 2021.

Support for Vulnerable Groups

SK materials currently conducts various social activities to provide basic livelihood support services to vulnerable groups that experience considerable difficulties in living. We provide 'food package support service' for the elderly living alone in the local community to enhance their nutrition intake. In addition to food package service, we also provide assistance on improving the residential environment such as the maintenance of drainage ditches, new bathroom construction, and wall reinforcement in preparation for the rainy season and financial aid for the heating cost to the vulnerable, especially the disabled and the elderly with difficulties in moving. For Chuseok which is known as the Korean Thanksgiving Day, we delivered the 'Happiness Kits' that contain COVID-19 quarantine goods, sanitary pads and holiday food, and provided food such as rice and kimchi and charcoal briquettes for heating at the end of the year.

Improvement of Residential Environments



Packing for Chuseok Happiness Kit



Installation of Carbon Monoxide (CO) Gas Detector

Since the revision of the national law in August 2020, installation or the replacement of CO gas detector has become mandatory. Nonetheless, due to its relatively high cost, vulnerable groups still have difficulties in installing or replacing the detectors. We regarded this as an important social issue and thus provided new CO gas detectors to 140 vulnerable households in Yeongju-si in December 2020 to solve such problem.

Support for Victim of Crime

SK materials provides a Crime Victim Support Service to improve the quality of life of victims whose livelihood has become difficult due to criminal trauma. In 2017, we signed a business agreement for financial support for victims of crime with the Yeongju-si Police Station and the North Gyeongsang Province Crime Victim Support Center. We raise the funding every year with several companies located in Yeongju-si and utilize the fund to provide the legal and medical support as well as the employment consulting service to victims for their early return to daily lives.

Social Contribution

Fostering Future Talents

SK materials is carrying out a range of activities to foster local talents. We develop and provide semiconductor materials-related educational programs to local students. Through Academic-Industrial Cooperation with local community schools and institutions, we expect to foster professional personnel and provide job opportunities for local students. We also operate several support projects such as the arts and sports scholarship program to foster talents in various fields in the community.

Job Experience Training for Semiconductor Materials

In the semiconductor materials industry, the main business item of SK materials, it is essential for workers to attain high capability of handling chemicals and secure professional understanding of production principles and process. We provide career experience programs to youngsters of the local community to enhance their understandings of semiconductor materials industry and provide supports to those who are interested in the industry to foster them as semiconductor materials experts.

In July and August 2020, we provided job experience, career counseling, and special lectures, including the introduction of related majors in university and job seeking methods, for the students of Yeongju Jeil High School and Yeongju Girls' High School. Through the education seminar, we were able to raise the participants' understandings of our main products, production principles, and semiconductor materials-related career path.

Job Experience Training at Yeongju Jeil High School



Operation of University-Industry Cooperation Programs

SK materials operates University-Industry cooperation to foster gas facility and process management experts and provides employment opportunities to talented candidates. We have opened and operated a 'gas processing training course' to foster young experts with the Yeongju-si campus of Korea Polytechnic University. In 2020, 15 outstanding trainees who completed the course were hired as SK materials employees.

In addition, we signed a business agreement with Kyungbuk College, and currently operates university-industry cooperation programs to jointly train experts while forming a mutually cooperative relationship in meeting the demand of industry. We opened the university-industry cooperation class in the Fire Fighting Safety and Management degree of Kyungbuk College, and employees from SK materials with professional knowledge in safety-related industry were sent to provide safety-related talks and lectures to trainees. In 2020, due to the spread of COVID-19, there were restrictions on running the programs, but from 2021 we plan to expand the scope of support activities such as field training programs, etc.

Fostering Talents in Arts and Sports Industry

SK materials has provided scholarships to students in major of arts and sports in Yeongju-si since 2017. We sponsor scholarships for arts and sports students at 6 elementary, middle and high schools, and universities in Yeongju-si, including a soccer team of Dongyang University.

Happiness Sharing Activity

Including various cultural events, SK materials is committed to implement happiness sharing programs to discover and provide support for local community. In 2020, cultural events such as that of the 'My Neighborhood Filial Piety Festival' were canceled due to COVID-19, but instead, 'untact' activities were conducted for the safety of the community.

Hosting 'Cinema Week in My Neighborhood'

Cinema Week in My Neighborhood was held from the 29th to 31st of October 2020, and we provided a new cultural life to citizens of Yeongju-si who might have been mentally exhausted from the prolonged COVID-19. To ensure safety of the event, Cinema Week in My Neighborhood was organized in the form of a drive-in theater, and 100 vehicles (300 participants) per day were invited. Through the event, we successfully provided various cultural events and contents such as family movies, visible radio, and giveaways to Yeongju-si citizens who were not able to fully enjoy the cultural life due to COVID-19.

Cinema Week in My Neighborhood



Social Contribution

School Zone Safety Campaign

SK materials carried out a school zone safety campaign to promote the safety of children in the community. School Zone Safety Campaign is a social awareness raising campaign that aims to ensure safe commute of children to school by attaching the promotional materials on vehicles that are illegally parked in school zones. In 2020, we cooperated with local government offices and institutions such as Yeongju-si Police Station, Yeongju-si Office of Education, Save the Children, and the company's volunteer group called Happiness Sharing Volunteer Group to make the campaign more meaningful and effective. SK materials will further cooperate with the local government offices and institutions to spread safety culture in school zones.

School Zone Safety Campaign Promotional Materials



Social Contribution Investment

Classification	Unit	2018	2019	2020
Amount of Annual Investment	KRW million	1,373	1,621	2,043

Participation of Employees in Social Contribution Activities

SK materials encourages employees to voluntarily participate in social contribution activities and create an organizational culture that help solving social problems of the local community. As part of these efforts, we have operated Happiness Sharing Volunteer Group since 2019, and we believe such an operation can wisely use the talents of employees in solving the problems faced by local communities. In 2020, due to COVID-19, face-to-face volunteer activities were cancelled, but a number of other participation activities were conducted instead to create social value and a virtuous circle.

Voluntary Works of SK materials Happiness Sharing Volunteer group in 2020



The KPIs of the performance evaluation and its compensation standard for social value (SV) goal is set at the same level as the economic value (EV) goal, and we pursue the daily creation of social value by assessing autonomous SV implementation for each employee every month. In addition, with the Happiness Sharing Volunteer Group, we support vulnerable groups of local community through the Happiness Sharing Donation by funding 0.5% of employees' basic salaries (1% for executives) as a matching grant*.

In 2021, we plan to expand the range of verifiable social value creation activities such as volunteer activities personally conducted by employees.

* Matching grants: A system in which a company donates the same amount as the amount funded by the employees

Communication with Local Society

SK materials continues to communicate with local stakeholders for its co-existence with the community. In particular, we promote a variety of communication activities to establish a cooperative system and builds trust with community, especially to secure the safety of local community. We regularly invite the local residents and provide a plant tour to check on-site safety facilities while explaining our safety policies. We conduct emergency evacuation drills for residents of Pildu Village to minimize the damage in the event of any emergency situations in the plant.

In addition, we proactively cooperate with local governments, NGOs, and universities to support vulnerable groups, foster talents, and organize cultural and artistic activities in the region. Through active communication, we will continue to maintain cooperative relationships with local stakeholders and provide support that meets the local needs.

Community Briefing



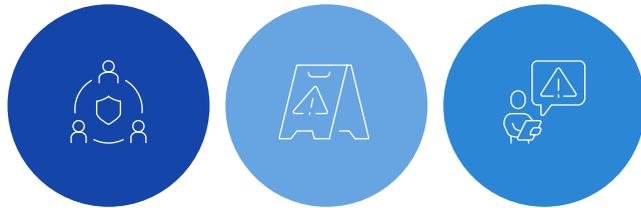
Security and Information Protection

Security Management System

Security Regulations and Guidelines

SK materials has 16 guidelines for information security management and 4 guidelines for physical security. In 2020, we newly established 5 applicable guidelines of industrial security for employees and outsiders to enhance the protection of our industrial technology assets. All regulations and guidelines are reviewed and revised by the Chief Information Security Officer (CISO) at least once a year and shared to all employees at all times through the groupware system.

Security Regulations and Guidelines



Information Security Regulations

Guidelines for information asset management, response to infringements, personal information protection, security inspection, and protection audit process, etc.

Physical Security Regulations

Guidelines for facility security, vehicle access, and entry and exit of personal goods, etc.

Industrial Security Regulations

Guidelines for industrial technology asset management, industrial security inspection, accident response, industrial system operation, etc.

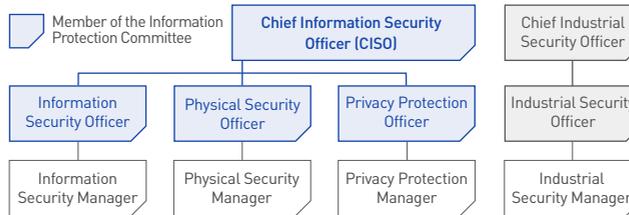
Security Management Organization

SK materials has a Chief Information Security Officer (CISO) to protect its proprietary information systematically and diligently. In addition, we appoint officers and managers in areas of information security, physical security, industrial security, and personal information protection. We operate the information protection committee to discuss and review the information protection related issues, and CISO, an information security officer, a physical security officer, an industrial security officer, and a personal information protection officer participate in the committee.

Industrial security policies and guidelines (one regulation and five guidelines) have been established to prevent the leakage of information related to SK materials' business and facilities. In order to protect our information and data systematically and diligently, we have formed a separate organization.

The Industrial Security Committee is operated as a decision-making body that reviews, discusses, and determines any kind of industrial security issues and is composed of an Industrial Security Officer, an Industrial Security Manager, and the IT Planning and Security team.

Security Management Organization Chart



Industrial Security Activities

SK materials establishes and operates a firewall system to prevent external infringements of industrial system as well as leakage of internal information.

SK materials maintains a separately operating network environment that blocks the physical connections by a firewall system and prohibits the import/export of unauthorized data and the use of removable storage devices.

SK materials also ensures security through regular OS updates and antivirus installation on major assets and devices and conducts internal security check activities at least twice a year.

Information is regarded as an increasingly important corporate asset while the information leakage process is becoming more varied. SK materials structurally manages internal security, raises the awareness of security of its employees, and establishes the information security-related guidelines and regulations to prevent the leakage of personal information. In addition, we have security processes under the operation to protect information and facilities of industrial technology assets from any cyber disasters and hackings.

Information Security Activities

SK materials operates security solution systems such as IDS (Intrusion Detection System)/IPS (Intrusion Prevention System), firewall, and DDoS (Distributed Denial of Service) response equipment to prevent information infringements from the external entity. We are constantly monitoring information infringements through security solution equipment and systems and regularly inspecting and improving the solution system through vulnerability diagnosis and mock-hacking practice. In addition, we have established a response manual to infringements per type, which requires the person in charge to report to the manager in cases of any incidents with a CVSS* score of 9 or higher for corrective measures. In 2020, including subsidiaries, we conducted company-wide security checks to minimize security risks and introduced automation tools to diagnose vulnerabilities of IT infrastructures. In addition, we strengthened our IT security against information infringement attacks via the Internet by separating the Internet from the business network. In 2021, we plan to enhance our ransomware response activities by introducing APT** defense solutions.

Furthermore, we regularly monitor and check on the security equipment log to prevent information leakage. We disseminate information security management regulations, information leakage cases, and response procedures to our employees, and we have established an internal security center as well as a reporting system for suspicious case reporting.

* CVSS: Common Vulnerability Scoring System by Infringements Response Association
** APT: Advanced Persistent Threat, which is security threats through intelligent and continuous methods such as Advanced Persistent Threat, mail malware attachment, and PC pattern detection

Personal Information Protection

SK materials has established the Personal Information Protection Guidelines to provide security requirements to be observed in all personal information protection processes, such as collection, recording, storage, retention, processing, editing, search, output, use, provision, and destruction. Every personal information is encrypted and stored, and an information protection system is established to nominate a person in charge of handling personal information and to prevent unauthorized access to the database. Employees who handle personal information must complete personal information protection training, and they continuously inspect and promote the personal information management system.



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Governance

Composition of BOD

As of the 31st of May 2021, the BOD of SK materials consists of one executive director, one outside director, and two non-executive directors. The BOD maintains its independence in accordance with the Commercial Act, with outside directors representing more than one-fourth of the total number of directors. The chairman of the BOD is appointed by a resolution of the BOD. At SK materials, Jang, Dong Hyun, a non-executive director, serves as the chairman of the BOD, instead of the CEO.

Members of Board of Directors

CEO/Executive Director

Lee, Young Wook
2021.03.31 ~ 2024.03.31
- (Former) Director of Investment Center 2, SK Inc. Co., Ltd.
- (Former) Director of PM2, SK Inc. Co., Ltd.



CEO

Other Non-executive Director

Jang, Dong Hyun
2020.03.31 ~ 2023.03.31
- (Current) President & CEO, SK Inc. Co., Ltd.
- (Former) CEO, SK telecom Co., Ltd.



Chairman of Board of Directors

Other Non-executive Director

Jang, Yong Ho
2020.03.31 ~ 2023.03.31
- (Current) CEO, SK siltron
- (Former) CEO, SK materials



Outside Director

Tak, Yong Suk
2021.03.31 ~ 2024.03.31
- Professor, Chemical Engineering of Inha University
- Vice Chairman of the Korea Electrochemical Society



* As of 31st of May 2021

BOD Attendance Rate in 2020 (average)



97.5%

SK materials operates the Board of Directors (BOD) as the decision-making body to faithfully reflect the opinions of shareholders in management.

The BOD has the authority to make decisions on key management issues stipulated by the Commercial Act or Articles of Incorporation, delegated by the general meeting of shareholders, basic company management policies and business execution, and plays an advisory role regarding activities concerning the execution of duties of directors.

Appointment of Directors

Independence of Directors

Directors are nominated by the BOD and appointed by a vote at the general meeting of shareholders. To nominate an outside director, we evaluate the independence of each candidate by considering his/her relationship with the largest shareholder, parent company, subsidiary, and suppliers of SK materials. In Article 17 of the BOD Regulations, the obligation of outside directors to avoid acts that may cause a conflict of interests during their term in office, such as engaging in other companies in the same industry, is stipulated, and any outside director will be required to resign, if any conflict is found through a vote of the BOD.

Diversity of Directors

SK materials prohibits any form of discrimination against gender, race, religion, nationality, and cultural background in the nomination process to secure the diversity among directors.

Expertise of Directors

SK materials considers the expertise in various fields when appointing outside directors, particularly focuses on the management/economy and chemical industry/engineering backgrounds. Tak, Yong Sug, SK materials' present outside director, obtained a Ph.D. in Chemical Engineering from Iowa State University and has worked as a member of the executive committee for Hydrogen Use Convention of the International Energy Agency, and is a member of the executive committee of the International Hydrogen Fuel Cell Partnership. SK materials appointed him as its outside director in recognition of his expertise in the chemical industry.

We plan to recommend more candidates for a pool of outside directors, in order to improve its expertise and professionalism, by striving to look for candidates with industrial expertise and/or global capabilities.

BOD Operations

BOD Meetings and Decisions

In 2020, the BOD meeting of SK materials was held 10 times, and thirty-six (36) agendas were reviewed or approved. In particular, the BOD is fulfilling its responsibility on ESG management by reviewing RE100 membership enrollment and ESG implementation plan and approving the introduction and operation of the Fair Trade Compliance Program (CP). The BOD meeting shall be held once the attendance quorum is met, and agenda items shall be adopted when the majority of attended directors agree to do so. Agenda items categorized as 'Transactions between a director and the company' and 'Prohibition of the Use of Company Opportunities and Assets' specified in the BOD Regulations, however, require the approval of more than two-thirds of the total number of directors' adoption.

Support Activities of Outside Directors

To support the decision-making process of the outside director, SK materials' Legal Team supports the outside director and it provides the agendas and relevant documents of the coming BOD to the outside director for his full understanding and reviewing of the contents, in advance of the BOD. Information on other major internal issues is also provided. In 2020, SK materials' outside director was educated on the systematic changes in the BOD and general shareholders' meeting to enhance his expertise in the governance.

Governance

Evaluation and Remuneration of Directors

The directors are remunerated, according to the director remuneration limits approved at the general meeting of shareholders.

The remuneration for executive directors consists of basic wages and incentives based on performance evaluation, and a stock option is given as a remuneration to improve long-term corporate value. To guarantee the independence of the outside directors, SK materials does not provide any additional incentives other than the basic wages.

Remuneration of Directors in 2020

(Unit: KRW million)

Classification	Total Remuneration	Average Remuneration per Director
Executive Director and Other Non-Executive Directors	2,054	685
Outside Director	72	72

Operation of Audit system

SK materials appoints a full-time auditor with a resolution of the general shareholders' meeting to supervise the activities of the BOD. The auditor participates in the BOD meetings and independently supervises the work of the directors and may request for the submission of related documents, if necessary. Only the candidates who meet the requirements for independence, after an evaluation of their interests with SK materials and its major shareholders, are recommended as final auditor candidates, and we review their expertise in audit tasking, such as that of finance/accounting/risk management. The Legal Team and the Accounting Team have been designated as supporting teams for auditors and they provide legal advices and internal control advice to the auditors. In 2020, we provided the auditors education on the systematic changes on general shareholders' meeting and the BOD to enhance expertise in the governance. In 2021, the internal accounting management system training will be provided at least once a year.

Shareholder-Friendly Management System

Protection of Shareholders Rights

To protect the rights of shareholders, SK materials has adopted an electronic voting system to allow for its shareholders to exercise their voting rights without attending the general shareholders' meeting. In addition, we solicit the proxy at the general shareholders' meeting to diversify their voting right exercise.

As indicated in the provisions of the Articles of Incorporation, we notify the shareholders in writing or electronic documents which contains the date, place, and purpose of meeting, two weeks prior to the date of the shareholders' meeting, in order to guarantee the shareholders' right to access to any relevant information. In particular, if the meeting purpose is to review the appointments of directors, we share the information of candidates such as the name, career, and recommender of a director candidate, in advance of the general shareholders' meeting.

Dividend Policy

SK materials' dividend per share has been increasing since 2015, and it has reacquired the treasury shares in 2017, 2018, and 2020 to preserve the return to shareholders. We will maintain business performance based on our stable dividend policy and enhance the value for our shareholders by promoting business activities for increasing the corporate value, in long-term perspective.

Dividend

Classification	Unit	2018	2019	2020
Net Profit	KRW million	75,655	67,156	57,396
Net Earnings per Share	KRW	7,746	7,078	6,178
Total Amount of Cash Dividends	KRW million	35,579	36,528	35,831
Cash Dividend Payout Ratio*	%	47.0	54.4	62.4
Dividends per Share	KRW	3,750	3,850	4,000

* (Total Amount of Cash Dividends) / (Net Profit during the Period) × 100

** Separate Financial Statements basis

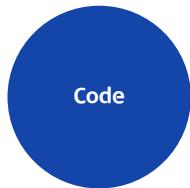
Ethical Management

Ethical Management System

SK materials regards the Code of Ethics as the basic principle of ethical management, and determines ethical risks through an ethical management process which consists of 'Prevention,' 'Detection,' and 'Response.' For the Code of Ethics, we have enacted Ethical Management Rules and Action Principles for all employees, including those in subsidiaries, as the basis for decisions and actions in workplaces.

The Ethics Management Department, which is organized under the direct control of the CEO, implements and monitors the ethical management process and conducts activities that can promote early adaptation of anti-corruption organization culture. Major ethical management issues and activities are reported to the BOD at least once a month at CEO meetings.

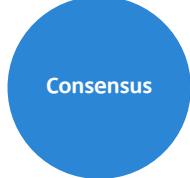
Three Elements of Ethical Management (3C)



- Code of Conduct
- Violation cases by main areas (don'ts)
- Ethical management practice FAQ for SK Leaders



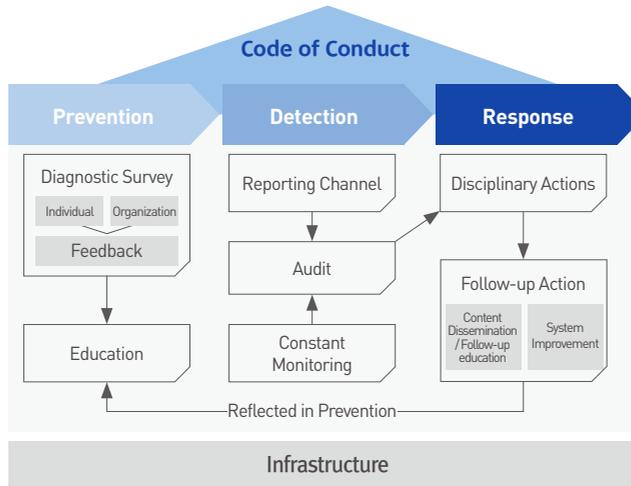
- Organization and system dedicated to ethical management
- Self management system
- Internal system, counseling system, and informant protection



- Development and implementation of ethical management education programs
- Ethical management Letter
- Communication and participation programs for employees
- Diagnosis of ethical management level (Survey)
- Ethical Practice Pledge of employees

SK materials recognizes ethical management as one of the priorities for sustainable management of companies. Based on SK Management System (SKMS), we have established the ethical management system across the management activities to maintain the trust and mutual respect with various stakeholders including customers, employees, shareholders, and suppliers. On the 22nd of February 2021, we were officially approved to join the UNGC, expressing our willingness to comply with its 10 principles, including anti-corruption.

Ethical Management Framework



* Scope: SK materials and its subsidiaries

Anti-Corruption Compliance Regulations

Classification	Description
Compliance	<ul style="list-style-type: none"> • Prohibition of Improper Solicitation and Graft • Prohibition of Gifts and Gratuities • Prohibition of travel and business trip funding • Prohibition of external donations • Prohibition of illegal political funding • Prohibition of express charge • Prevention of conflicts of interest
Mergers and acquisition	<ul style="list-style-type: none"> • Preliminary compliance due diligence • Establishment of internal control and compliance programs such as employee compliance education, inspection/monitoring, and third-party compliance due diligence after acquisition
Compliance Control	<ul style="list-style-type: none"> • Fair and appropriate bookkeeping and records management • Obligation to report when violations or potential violations are discovered • Support for related departments and response to their inquiries

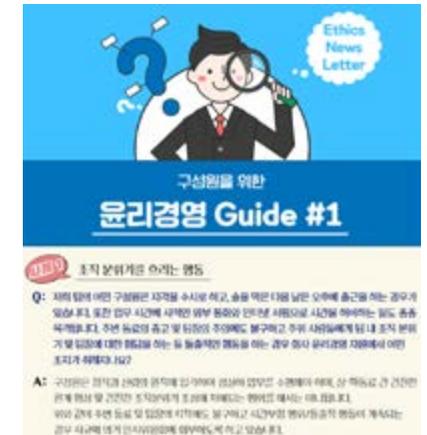
Internalization of Employees' Awareness of Ethical Management

Business Ethics Pledge and Compliance Guidelines

SK materials annually asks the employees to sign a business ethics pledge to raise the awareness of ethical management. The Regulations of Ethics, a detailed compliance guideline for the Code of Ethics, were established as our rule to provide the criteria for decision-making and behavior of employees. All employees, including subsidiaries, are responsible for complying the regulations, and in situations that are not stipulated in the Regulations of Ethics, decisions and actions shall be made based on the decision-making principle of 'Lawful, Transparent and Rational.'

The ethical management department provides advice and publishes an ethical practice letter on monthly-basis to disseminate specific guidelines related to ethical practice. The ethical practice letter provides guides for principles and countermeasures for situations that employees may face while performing their duties.

Ethical Practice Letter



Ethical Management

Ethical Education Program

SK materials provides ethical management education every year to raise the ethical awareness of its employees, while sharing information regarding the relevant laws and regulations. In 2020, we provided online trainings regarding basic ethics and anti-corruption for all employees including contract workers and domestic and overseas subsidiaries.

Anti-corruption education is provided under various themes to enhance employees' access and understanding on anti-corruption. In 2021, anti-corruption contents will be dealt heavily in the ethics education program so that anyone can watch and learn the contents via online education site. We also hold annual ethics management practice workshops to encourage our employees to make the right decisions in any ethical dilemmas. In workshops, employees set situational ethical issues that their organization may face during the business activity and fully discuss on the solutions and preventive measures to build a consensus on how to improve the organizational culture. In 2020, 88 sub-departments participated in the workshop and had in-depth discussion on topics such as workplace bullying.

In order to induce the culture of ethical management practice to suppliers, we distribute 'Mutual Growth Magazine' that includes relevant information including the major changes in the ethical management environment to our suppliers on a monthly basis. In 2020, we provided regular themed trainings for suppliers twice a year to share the contents and information on the anti-bullying in the workplace law and amendments to major labor laws.

Mutual Growth Magazine



Ethical Risk Monitoring

Practice Survey for Ethical Management

SK materials conducts an annual ethical management practice survey to measure employees' awareness of ethical management and to identify vulnerable spots of programs and organizational culture. In 2020, the survey was conducted on employees from domestic and overseas workplaces and subsidiaries, and 94.5% of employees participated in the survey. Based on the findings from the survey, we have implemented improvement tasks and developed ethical management programs. The results of survey are reported to executives to encourage promotion of ethical management implementation plan for each organization.

Self-Inspection System for Ethical Management

SK materials operates a self-inspection system for departments to identify and respond to potential ethical risks. Self-inspection is conducted as an annual risk assessment method, and it evaluates six main risk management areas* from the checklist.

* HR, purchasing, expenses, trade receivables, suppliers, and others

Special Terms for Ethical Practice

SK materials has enacted the Special Terms for ethical practice that is applicable to suppliers to spread the culture of ethical management in the supply chain. When signing business contracts with suppliers, we request them to agree to comply with the Special Terms.

Items of Special Terms for Ethical Practice

Obligation to Prevent Bribery to Public Officials	<ul style="list-style-type: none"> • Compliance with domestic and international anti-bribery and corruption laws and regulations * United Nations Anti-Corruption Convention, FCPA (Foreign Corrupt Practices Act.), etc.
Violation Type	<ul style="list-style-type: none"> • Unethical conduct related to the provision of benefits • Unfair practices, such as rigged bids • False entry of important information and intentional omission; • Management information leakage, etc. • Causing property damage through misconduct • Forcing and encouraging violations • Obstruction of fair business
Sanctions for Violations	<ul style="list-style-type: none"> • Cancellation of registration • Bidding Restrictions • Opportunity given to explain the violations

Ethical Management

Ethical Management Reporting and Process Handling

Ethical Management Violation Reporting System

SK materials operates an ethical management reporting system so that both employees and stakeholders can report unethical behavior. Reports are received and handled privately through the ethical management website (<https://ethics.sk.co.kr>) and e-mail (skmr-ethics@sk.com). The identity of reporters and the contents of their reports are protected in accordance with our Reporter Protection Policy. We also operate a grievance counseling center called 'Harmonia' for our employees. At Harmonia, employees can receive one to one counseling from external experts. During the counseling, if any suspicion of violation is identified, the guidance for ethical regulations and process handling shall be provided to help victims to safely receive any help if needed.

Informant Protection

1. You will not be disadvantaged or discriminated against for making a justifiable report.
2. If you are treated unfavorably following a report, you can request protection from the ethical management department, and the ethical management department will take all measures to prevent any disadvantages.
3. The informer's identity and the content of the report will be kept strictly confidential so that it will not be revealed to the public.
4. In the process of confirming the facts, anyone who cooperates with the investigation by means of statements, materials, etc. is equally protected.
5. Even if you participated in an unethical or illegal act, the penalty for such act will be lessened if you report the violation yourself.

Receiving and Handling Ethical Management Reports

In 2020, a total of five reports were received through the ethical management violation reporting system. All the reports went under investigation for the fact checks and for the violations of the Code of Ethics, and as a result, none of unethical acts such as conflicts of interest were identified. Once an unethical behavior is confirmed, we hold the Human Resources Committee based on the relevant regulations and discusses on the reassignment or the transfer of the perpetrator.

Number of Ethical Management Reports Received

Classification	2018	2019	2020
Ethics/Anti-corruption	1	1	1
Suppliers	1	1	1
HR	1	4	3
Other	0	0	0
Total	3	6	5

Ethical Management Reporting and Handling Process



Compliance Management

Compliance Management System

SK materials established the compliance control policy that stipulates the matters to be followed by employees to prevent legal risks that may occur in business activities. The compliance control policy consists of the roles of the BOD, the compliance officer's duties, compliance control activities and its validity evaluation, and key standards related to business performance. The BOD reviews the compliance management performance of the previous year, such as the compliance and non-compliance cases with the compliance control policy, based on the annual report prepared by the compliance officer, assesses the plan of the year, and appoints the compliance officer every three years. The appointed compliance officer is responsible for general compliance control activities, including compliance risk assessment, cessation of illegal acts, and request for improvement of those activities. SK materials has nominated the Legal Team's leader, as a compliance officer, since 2017.

Compliance Control Activity

In order to systematically manage compliance risks, SK materials selects major compliance risk areas and conducts compliance control activities, based on these areas. In 2020, we signed a fair trade and mutual growth agreement with eighteen (18) suppliers and provided training on 'the revised Labor Standards Act,' known as the 'Workplace Harassment Prevention Act' and 'the revised Labor Law' for the suppliers. The payment deadline for suppliers* has been shortened from 60 days to 30 days to strengthen compliance with the Act on the Promotion of Collaborative Cooperation between Large Enterprises and Small-Medium Enterprises. SK materials supported the reorganization of internal rules and the governance structure of domestic and overseas subsidiaries and inspected the public disclosures of its subsidiaries. Based on these activities, SK materials was selected as the 'Excellent Disclosure Company' in the KOSDAQ market by the Korea Exchange (KRX) in March 2020. In 2021, we will strengthen internal management standards in accordance with the enactment of the Occupational Safety and Health Act and the Serious Accident Punishment Act and expand compliance education for employees and suppliers to raise the awareness of compliance management.

* Applied to small and medium enterprise suppliers only

The compliance of laws and regulations is the basis of SK materials' all business activities, and in particular, the risk management activities are its priority. In order to induce a systematic compliance business management, the BOD establishes compliance business management system, appoints a compliance officer, and selects and manages major areas of compliance risk. In 2020, we introduced and have been operating the Compliance Program (CP) to establish a compliance foundation for fair market competition.

Key Compliance Risk Areas



Fair Trade and Competition

Fair Trade and Competition Principles

SK materials' Fair Trade and Competition principles in the ethical management regulations states that it understands and is willing to comply with fair trade and competition laws and regulations and the company's CP (Compliance Program) operational regulations. The CP operation regulations strictly prohibit unfair trade practices with competitors and counterparties by imposing the obligations to its employees. Furthermore, Article 41 of the basic contract for product transaction (provision of technical data, etc.) is established to protect the intellectual property rights and technical information of the suppliers. In this Article, it is stated that the 'Confidentiality Obligation of the Recipient' shall be complied and fulfilled for any materials or information provided by the suppliers that requires confidentiality.

Obligations of Employees under the CP Operational Regulations



Introduction of Fair Trade Self-Compliance Program (CP)

SK materials introduced the CP through the approval of the BOD in February 2020 in order to preemptively respond laws and regulations related to the fair trade and to systematically fulfill the social responsibility of collaborative cooperation in the society. In July 2020, after the appointment of the head of the Ethics Management Department as the Fair Trade Compliance Manager and the establishment of a fair trade compliance system, we have been registered as a CP introduction company, certified by the Fair Trade Commission.

To raise employees' awareness of the CP, fair trade online training was provided and conducted for 1,097 employees including subsidiaries from June to July 2020, and approximately 94% of employees (1,024 people) completed the training. SK materials conducted a self-inspection on subcontracting status of SK materials and SK trichem Co., Ltd., to monitor whether they comply with fair trade laws and confirmed that no violations were found during the inspection.

The CP operation performance in 2020 and the operation plan for 2021 were reviewed by the Fair Trade Compliance Manager at the BOD in January 2021. We plan to conduct a review process led by the BOD at the beginning of every year. In 2021, we will produce and distribute the Fair Trade Self-compliance Manual and expand the scope of fair trade training and fair trade inspection for employees.

Fair Trade Compliance Education

Subject	Description	Target
Basic compliance education	Precautions and Action Guide for collusion/cartel risk management	Employees of relevant departments (including subsidiaries)
Advanced compliance education	Compliance education such as trade secrets, personal information, labor, intellectual property rights, and anti-corruption, based on job characteristics of employees	Manager and hands-on workers of relevant departments
Monopoly Regulation and Fair Trade Act Basic education	Precautions for risk prevention, such as collusion/cartel, unfair transaction, regulations on business combinations	All domestic employees (including subsidiaries)

Tax

Direction of Tax Management

Compliance with Tax Laws and Tax Risk Management

SK materials faithfully reports and pays taxes in accordance with the tax laws. We respond to all requests from the tax authorities, cooperates with tax investigations, and transparently discloses data when requested by the authorities. In addition, we are proactively responding to the changes in domestic and foreign tax laws by hiring internal tax experts and seeking for external advices. We have tax-related control clauses within the internal accounting management system and continuously inspect the management and reporting systems.

Compliance with Tax Policies of Country

The company complies with all tax regulations of countries in which it operates business and fulfills its payment obligations. BEPS documents are prepared and reported in order to comply with the revised tax principles for each country, and the suitability of transactions between the head office and overseas subsidiaries is monitored according to the OECD's BEPS* action plan.

* BEPS: Base Erosion and Profit Shifting

Tax Payment

Local Worksites and Subsidiaries

(Unit: KRW 100 million)

Name of Company	Classification	2019	2020
SK materials	Sales	4,546	5,201
	Operating profits	989	912
	Amount of tax paid	198	175
Subsidiaries	SK materials Sales	1,573	1,758
	airplus Inc. Operating profits	569	580
	airplus Inc. Amount of tax paid	84	90
	SK trichem Co., Ltd. Sales	1,023	1,505
	SK trichem Co., Ltd. Operating profits	504	635
	SK trichem Co., Ltd. Amount of tax paid	48	125
	SK showa denko Co., Ltd. Sales	126	240
	SK showa denko Co., Ltd. Operating profits	27	110
	SK showa denko Co., Ltd. Amount of tax paid	5	5
Subsidiaries	SK materials Sales	19	259
	renewtech Co., Ltd. ²⁾ Operating profits	5	75
	renewtech Co., Ltd. ²⁾ Amount of tax paid	0	10
	SK materials Sales	N/A	147
	performance Co., Ltd. ³⁾ Operating profits	N/A	-33
	performance Co., Ltd. ³⁾ Amount of tax paid	N/A	0
	SK materials Sales	N/A	0
	JNC Co., Ltd. ³⁾ Operating profits	N/A	0
	JNC Co., Ltd. ³⁾ Amount of tax paid	N/A	0
	Happy Companion Co., Ltd. Sales	5	14
	Happy Companion Co., Ltd. Operating profits	1	4
	Happy Companion Co., Ltd. Amount of tax paid	0	0

1) Separate Financial Statements basis on each subsidiary

2) Only the Sales and the operating profit for December 2019 are reported as was newly incorporated as the consolidated company after closing its M&A deal

3) Only the status of 2020 is reported as were newly incorporated as consolidated companies after the establishment in 2020

SK materials is aware of its impact on the local economy as well as its social responsibility for tax payment. We are dedicated to fulfilling the payment obligations by complying with tax laws and therefore providing social contribution to the society.

Overseas Worksites

(Unit: KRW 100 million)

Country (Region)	Classification	2019	2020
China (Zhenjiang)	Sales	320	394
	Operating profits	-13	-5
	Amount of tax paid	5	5
China (Xian)	Sales	186	348
	Operating profits	4	11
	Amount of tax paid	1	3
China (Shanghai)	Sales	19	79
	Operating profits	-1	3
	Amount of tax paid	0	0
Japan	Sales	246	77
	Operating profits	7	8
	Amount of tax paid	2	3
Taiwan	Sales	638	270
	Operating profits	16	17
	Amount of tax paid	3	4

* Separate Financial Statements basis on each subsidiary

Effective Tax Rate

Classification	Unit	2019	2020
Pre-Tax Profits	KRW 100 million	857	754
Corporate Tax Expense	KRW 100 million	186	181
Tax Adjustment ¹⁾	KRW 100 million	164	215
Effective Tax Rate ²⁾	%	21.7 ³⁾	23.9
Corporate Tax Burden ⁴⁾	KRW 100 million	198	175
Tax rate ⁵⁾	%	23.1	23.2

1) Tax base proposed adjustment amount

2) (Corporate Tax Expense) / (Pre-Tax Profit) × 100

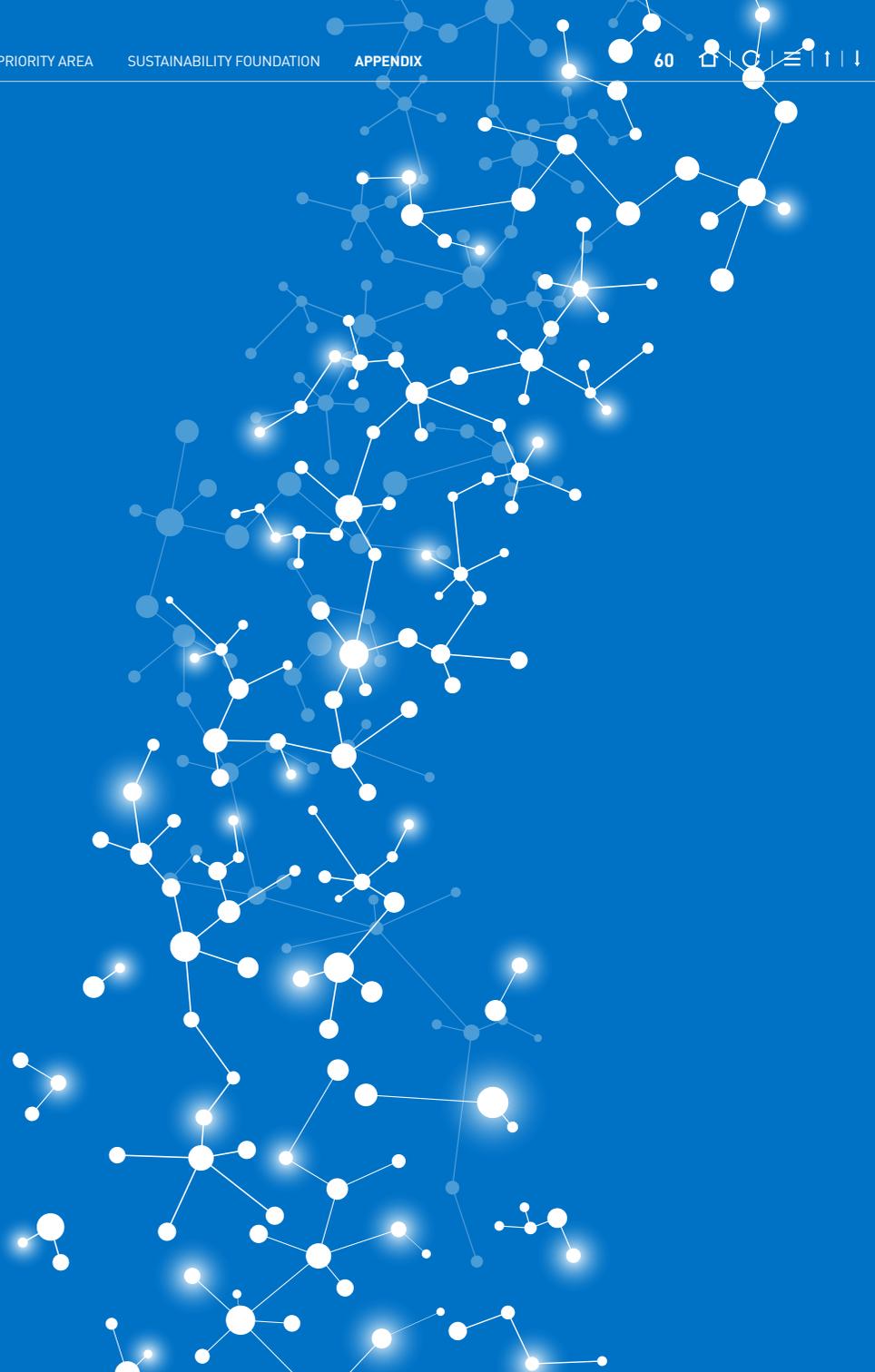
3) Effective tax rate reduced as the corporate tax expense was adjusted due to the changes in corporate tax return after correction request

4) Tax paid by cash in reporting year

5) (Corporate Tax Burden) / (Pre-Tax Profits) × 100

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Financial Statements

Separate Financial Statement

(Unit: KRW)

Classification	2018	2019	2020
Assets			
Current assets	134,679,431,096	177,166,171,437	180,513,367,723
Cash and cash equivalents	1,163,708,094	1,673,547,768	2,405,768,632
Trade receivables	46,625,903,381	54,073,271,598	57,450,207,808
Other current financial assets	3,012,464,905	2,860,784,941	3,015,110,072
Other current assets	4,779,890,360	8,472,199,049	7,911,906,382
Inventories	79,097,464,356	110,086,368,081	109,730,374,829
Non-current assets	813,145,575,057	899,367,027,434	943,971,399,792
Profit or loss - Fair value financial assets	9,096,027,101	10,252,037,983	11,243,222,901
Other comprehensive income - Fair value financial assets	82,042,937	82,042,937	15,422,934,993
Other non-current financial assets	2,753,306,600	3,614,758,000	4,447,377,100
Investment shares on subsidiary companies	207,551,100,488	249,267,660,488	300,267,660,488
Tangible assets	585,813,399,483	614,669,637,686	590,840,928,796
License assets	-	8,406,054,449	11,941,824,900
Intangible assets	7,849,698,448	7,272,365,978	8,485,330,105
Net defined benefit assets	-	5,802,469,913	1,322,120,509
Total assets	947,825,006,153	1,076,533,198,871	1,124,484,767,515
Debt			
Current Liabilities	272,735,370,897	318,413,991,839	466,925,105,863
Trade payables	6,713,326,262	5,673,492,565	5,408,213,018
Other current financial liabilities	62,144,290,219	72,362,408,076	75,625,852,041
Other current liabilities	9,425,600,921	11,319,025,147	797,639,200
Short-term debt	110,500,000,000	119,000,000,000	263,000,000,000
Long-term current debt	23,233,760,000	-	-
Current portion of bonds payable	49,940,369,181	99,967,291,880	109,990,595,736
Current corporate tax liabilities	10,778,024,314	8,631,026,877	8,919,569,160

(Unit: KRW)

Classification	2018	2019	2020
Current lease liabilities	-	1,460,747,294	3,183,236,708
Non-current liabilities	304,663,303,049	354,119,476,233	360,448,320,735
Other non-current financial liabilities	12,100,315,361	6,034,120,865	5,096,786,320
Other non-current liabilities	256,706,348	28,801,531	-
Bonds	289,245,193,061	339,140,888,197	344,133,296,597
Net defined benefit liabilities	2,541,860,873	-	-
Deferred tax liabilities	519,227,406	1,943,474,225	2,514,283,612
Long-term lease liabilities	-	6,972,191,415	8,703,954,206
Total liabilities	577,398,673,946	672,533,468,072	827,373,426,598
Equity			
Capital	5,273,836,500	5,273,836,500	5,273,836,500
Capital in excess of par value	60,939,012,730	60,939,012,730	60,939,012,730
Other capital adjustments	(160,741,234,684)	(158,738,846,142)	(287,510,622,406)
Earned surplus (Deficit)	464,954,717,661	496,525,727,711	518,409,114,093
Total equity	370,426,332,207	403,999,730,799	297,111,340,917
Total Liabilities and Shareholders' Equity	947,825,006,153	1,076,533,198,871	1,124,484,767,515

Financial Statements

Separate Comprehensive Income Statement

(Unit: KRW)

Classification	2018	2019	2020
Sales	444,872,835,762	454,649,037,133	520,072,785,854
Cost of sales	290,400,335,813	297,316,117,370	356,868,931,699
Gross profit	154,472,499,949	157,332,919,763	163,203,854,155
Selling and Administrative expenses	48,803,061,466	58,435,516,468	72,044,483,542
Operating profits	105,669,438,483	98,897,403,295	91,159,370,613
Other non-operating income	2,358,541,328	3,310,322,358	3,027,631,405
Other non-operating expenses	3,360,688,451	3,333,268,579	7,929,959,838
Financial Income	10,620,410,046	7,314,449,128	14,403,359,345
Finance cost	15,895,804,175	20,443,092,444	25,212,479,421
Profit before taxation	99,391,897,231	85,745,813,758	75,447,922,104
Corporate tax expenses	23,737,304,985	18,589,719,863	18,051,468,545
Net profit	75,654,592,246	67,156,093,895	57,396,453,559
Other comprehensive income	20,742,110,115	1,660,358,054	1,014,473,873
Items not subsequently reclassified as profit or loss			
Gains on land revaluation	22,209,699,206	1,666,668,149	-
Remeasurement Elements of the Net-Defined Benefit System	(1,467,589,091)	(6,310,095)	1,014,473,873
Total comprehensive income	96,396,702,361	68,816,451,949	58,410,927,432
Earnings per Share			
Basic and diluted earnings per share	7,746	7,078	6,178

Financial Statements

Consolidated Financial Statements

(Unit: KRW)

Classification	2018	2019	2020
Assets			
Current assets	263,755,162,409	312,726,555,644	411,268,282,035
Cash and cash equivalents	16,090,943,924	39,833,668,954	106,838,349,875
Short-term financial instruments	37,677,400	4,083,911,137	2,612,633,382
Trade receivables	123,385,523,767	102,294,397,030	126,296,135,362
Other current financial assets	3,213,193,566	2,206,260,485	1,989,406,534
Other current assets	9,265,478,703	12,873,991,669	21,311,209,457
Inventories	111,762,345,049	150,062,561,312	152,220,547,425
Assets Held for Sale	-	1,371,765,057	-
Non-current assets	1,134,675,366,830	1,303,107,564,452	1,627,363,873,794
Profit or loss - Fair value financial assets	9,096,027,101	10,252,037,983	11,243,222,901
Other comprehensive income - Fair value financial assets	109,430,729	196,660,729	15,537,552,785
Other non-current financial assets	3,265,276,825	4,560,768,736	5,465,917,171
Other non-current assets	2,418,892,875	3,608,701,546	4,674,833,658
Tangible assets	1,106,104,099,316	1,231,829,186,574	1,504,048,171,146
License assets	-	11,747,722,171	16,888,838,192
Intangible assets	9,999,227,399	31,653,872,400	64,685,407,907
Deferred income tax assets	3,682,412,585	3,432,062,615	3,428,971,542
Net defined benefit assets	-	5,826,551,698	1,390,958,492
Total assets	1,398,430,529,239	1,615,834,120,096	2,038,632,155,829
Debt			
Current Liabilities	501,338,999,977	681,553,763,700	951,864,568,563
Trade payables	17,917,181,139	15,909,439,565	22,150,800,006
Other current financial liabilities	84,041,389,379	123,002,502,690	136,866,608,784
Other current liabilities	10,664,756,249	13,479,777,545	2,304,700,901

(Unit: KRW)

Classification	2018	2019	2020
Short-term debt	274,951,393,367	242,268,121,552	614,205,589,216
Long-term current debt	43,717,844,432	159,293,590,820	33,303,205,222
Current portion of bonds payable	49,940,369,181	99,967,291,880	109,990,595,736
Current corporate tax liabilities	20,106,066,230	25,652,898,384	27,537,559,547
Current lease liabilities	-	1,980,141,264	5,505,509,151
Non-current liabilities	493,788,339,423	413,974,071,950	582,077,411,264
Other non-current financial liabilities	12,100,882,172	6,041,589,668	5,776,389,333
Other non-current liabilities	256,706,348	28,801,531	-
Long-term borrowings	188,564,949,776	55,249,940,000	208,499,960,000
Bonds	289,245,193,061	339,140,888,197	344,133,296,597
Net defined benefit liabilities	2,952,135,784	702,441,971	926,196,644
Deferred tax liabilities	668,472,282	4,305,995,127	12,595,158,038
Long-term lease liabilities	-	8,504,415,456	10,146,410,652
Total liabilities	995,127,339,400	1,095,527,835,650	1,533,941,979,827
Equity			
Equity attributable to Owner of Dominant Firm	376,232,030,531	471,800,153,664	437,169,708,160
Capital	5,273,836,500	5,273,836,500	5,273,836,500
Capital excess of par value	60,939,012,730	60,939,012,730	60,939,012,730
Other capital adjustments	(211,436,196,204)	(208,349,008,569)	(336,644,896,133)
Earned surplus (Deficit)	521,455,377,505	613,936,313,003	707,601,755,063
Non-controlling interest	27,071,159,308	48,506,130,782	67,520,467,842
Total equity	403,303,189,839	520,306,284,446	504,690,176,002
Total Liabilities and Shareholders' Equity	1,398,430,529,239	1,615,834,120,096	2,038,632,155,829

Financial Statements

Consolidated Comprehensive Income Statement

(Unit: KRW)

Classification	2018	2019	2020
Sales	687,252,387,797	772,194,040,270	954,980,712,566
Cost of sales	430,405,925,504	467,076,273,460	604,399,058,083
Gross profit	256,846,462,293	305,117,766,810	350,581,654,483
Selling and Administrative expenses	73,958,260,143	90,365,628,057	116,654,830,776
Operating profits	182,888,202,150	214,752,138,753	233,926,823,707
Other non-operating income	1,415,733,603	2,299,195,672	4,367,818,429
Other non-operating expenses	3,863,191,578	4,535,518,330	8,864,163,714
Financial Income	9,979,507,280	9,231,245,938	13,472,343,411
Finance cost	30,830,155,330	37,790,761,858	39,643,903,133
Profit before taxation	159,590,096,125	183,956,300,175	203,258,918,700
Corporate tax expenses	36,149,957,845	40,654,548,273	51,211,976,918
Net profit	123,440,138,280	143,301,751,902	152,046,941,782
Owner's Equity in Dominant firm	112,665,215,706	128,150,168,535	129,505,568,361
Non-controlling interest	10,774,922,574	15,151,583,367	22,541,373,421
Other comprehensive income	22,512,443,137	2,985,954,814	1,136,267,088
Items that are not subsequently reclassified to profit or loss			
Gains on land revaluation	24,691,016,705	1,021,186,841	-
Remeasurement Elements of the Net-Defined Benefit System	(1,781,520,927)	(95,688,054)	663,189,241
Items that may subsequently be reclassified to profit or loss			
Profit or loss on translation of foreign business	(397,052,641)	2,060,456,027	473,077,847
Consolidated Total Comprehensive Profit	145,952,581,417	146,287,706,716	153,183,208,870
Owner's Equity in Dominant firm	134,639,444,730	130,811,176,490	130,668,871,810
Non-controlling interest	11,313,136,687	15,476,530,226	22,514,337,060
Earnings per Share of Owner's Equity in Dominant Firm			
Basic earnings per share	11,536	13,507	13,940
Diluted net earnings per share	11,536	13,506	13,927

Social Value Performance and Measurement

(Unit: KRW 100 million)

Classification		2018	2019	2020	Formula		
Indirect Economic Contribution Performance	Employment	588.0	704.5	767.7	• Total wages of employees of the year (amount of withholding income for earned wage reported to the National Tax Service) - 804 employees at SK materials in 2020 (+62 employees in comparison to 2019)		
	Dividend	355.8	365.3	358.3	• Total amount of dividends for the year - Dividend amount in the statement of changes in equity in the financial statements		
	Tax payment	240.1	191.1	208.9	• Total amount of tax paid for the year		
Business Social Performance	Environment	Resource consumption	Water	-1.1	-1.1	-1.1	• ① Public water usage 34,204.0 m3 × unit cost of public water 1,681.03 KRW + ② Sewage usage 997,271.5 m3 × unit cost of sewage 52.70 KRW
		Environmental pollution	Greenhouse gas	-244.7	-251.9	-238.4	• GHG emission in the year of measurement 220,031 ton × GHG Eco-cost 104,109.57 KRW
	Air pollution		-0.5	-0.7	-0.4	• ① NOx emission 5,001.2 kg × NOx Eco-cost 7,201.05 KRW + ② SOx emission 292.5 kg × SOx Eco-cost 11,777.41 KRW + ③ Other pollutants emission (Dust and etc) 585.1 kg × Other pollutants emission (Dust and etc) Eco-cost	
	Water pollution		-0.2	-0.2	-1.4	• ① COD generation 8,622.00 kg × COD Eco_cost 123.48 KRW + ② T-N generation 4,680.72 kg × T-N Eco_cost 28,090.81 KRW + ③ Other generation 1,582.70 kg × Other Eco_cost (generation unit price is applied to each water pollutants)	
	Waste		-18.9	-5.8	-5.6	• ① Amount of waste (general waste-incineration) 202.03 ton × Amount of waste (general waste-incineration) Eco-cost 115,726.21 KRW + ② Amount of waste (general waste-filled in land) 3,083.92 ton × Amount of waste (general-filled in land) Eco_cost 165,718.29 KRW + ③ Amount of waste (hazardous waste-incineration) 34.13 ton × Amount of waste (hazardous waste-incineration) Eco_cost 762,386.76 KRW	
	Social	Labor	Employment of vulnerable groups	-0.9	-0.3	1.6	• Increase in earned income of vulnerable groups = (Earned income of vulnerable groups employed - Income before employment of vulnerable groups) × number of employees*(11) * Only applied the numbers employed by SK material's standard workplace for disabled (Happy Companion), which was established in August 2019 • Penalty on insufficient mandatory employment rate of disabled: Exceeded 2020 mandatory employment rate of disabled 3.4% (No penalty incurred)
			Living quality of employees	Family-friendly system	0.5	1.2	2.7
Education				-	0.4	0.1	• Total amount of education-related expenses * In 2020, with a launch of SK education platform mySUNI, online and contactless education system has been adopted, and this increased the learning hours per employee (48.4hrs in 2019, 201.9hrs in 2020)

Social Value Performance and Measurement

Classification		2018	2019	2020	Formula		
Business Social Performance	Labor	Safety and health of employees	Prevention of disease	51.7	44.9	42.3	• Cost for supporting disease prevention activities 42.26 KRW(100 million)
		Safety accident damage	-0.2	-0.0	-0.1	• Receipt of industrial accident (employee-related) compensation insurance 0.05 KRW(100 million)	
	Fair trade	Shortening of payment days	2.0	4.0	3.4	• Annual total amount of subcontract payments 1,588 KRW(100 million) × (Average number of days for payment based on large corporations 60 days - Average number of payment days 33.87 days)/365 days × Average interest rate of commercial banks 2.97%	
		Unfair transaction	-	-	-	• ① (1 st priority) Cost of damage to partners due to unfair transaction ② (2 nd priority) Expenses incurred in disposing of the Fair Trade Commission due to unfair transaction (fines, penalty, etc.)	
	Mutual growth	Cooperative partnership	Technical support and protection	-	-	4.0	• Benefits of suppliers through technical support and protection (input for technical support and protection) 1.19 KRW(100 million) ① Free cash contribution = Total amount of contributed cash ② Free contribution in kind = Estimated market price : 1 case of analysis equipment rental + 12 cases of analysis service provision (644hrs of analysis service a year, an average of 10,320,191 KRW* per case) * Application of 10% of management discount rate against the estimated market price ③ Free cash contribution & Low-interest loan = Loan amount × (Average interest rate of commercial banks - Provided interest rate) ④ Free contribution in kind & Low-interest loan = Estimated market price. ⑤ Purchase amount of technology development support products × Value-added rate of the relevant industry (supplier) * The provided interest rate is applied by checking the interest rate for types (programs). • Collaboration for green material development 2.79 KRW(100million)
			Management support	0.1	15.1	0.7	• Management support = Input cost or estimated market price (SK Mutual Growth Academy 0.04 KRW(100 million) + AHF regular social/business exchange meeting 0.04 KRW(100 million) + Support for infrastructure building at business partners 0.36 KRW(100 million) + Mutual Growth council 0.30(KRW 100 million))
		Social contribution and responsible purchasing	Social contribution purchasing	0.0	0.0	0.0	• Purchase performance through Happynarae = Purchase amount of subsidies of SK group from social enterprises (0.03 KRW(100 million)) x Value added rate of the relevant industry (40%) = 0.01 KRW(100 million) * although Happynarae is registered as a social enterprise under the contribution system, it is known as SK's unique platform that supports other social enterprises
	Health and safety of suppliers	Providing safe working conditions through the management of safety and health of suppliers	-	0.5	0.9	• Support cost for safety and health management of suppliers (Support provided for ISO 45001 Safety and Health Management System approval 0.43 KRW(100 million) + Working environment monitoring 0.3 KRW(100 million) + SHE consulting on business partners 0.05 KRW(100 million) + Supply of sanitary goods 0.1 KRW(100 million))	
		Property and cost to suppliers due to industrial accidents	-	-	-	• Property damage: Total cost of related damage • Human damage: Receipt of insurance for industrial accidents of employees of partners (expense of damage due to entrustment/ordering of the main contractor)	

Social Value Performance and Measurement

Classification	2018	2019	2020	Formula	
Social Contribution Performance	Social contribution activities	0.0	0.0	14.0	<ul style="list-style-type: none"> Contribution to social and economic support by Happynarae through profit distribution = Total social performance of Happynarae's support project (104 KRW(100 million)) × purchasing proportion of Happynarae (0.004083) = 0.43 KRW(100 million) * Measures the contribution of subsidiaries to the performance of Happynarae that supports the social enterprise ecosystem through profit distribution. Myanmar Cook Stove Business 13.59 KRW(100 million) (①+②+③) <ul style="list-style-type: none"> ① 2020 job creation for low income group (0.25 KRW(100 million)) = Employees at Cook Stove plant (21) × Minimum wage (85.2 USD/month) ② 2020 savings from firewood usage (5.20 KRW(100 million)) = Average of firewood savings per household a day (2.22kg) × Cost of firewood per Kg (46.65kyap) × Days in month (29-31 days) × Number of benefited households (Jan. 9,000 households / Feb.-Dec. 18,000 households) ③ 2020 increase in uptime through the decrease in cooking hours (8.14 KRW(100 million)) = Decrease in cooking hours per household a day (2.05hrs) × Proportion of labor activity hours in uptime (84.6%) × Value of time (25%) × Days applied (228 days = number of working days in Myanmar 248 days - national holiday 20 days) × Supplied cook stoves (Jan. 9,000 households / Feb.-Dec. 18,000 households) × Cook stove usage rate (100%) × Minimum wage in Myanmar (0.41 USD)
	Donation	13.3	13.8	18.5	<ul style="list-style-type: none"> Amount of legal/designated donation = Sum of legally recognized amount of donation for the year (Happiness Sharing donation 2.69 KRW(100 million) + Happy Alliance 0.6 KRW(100 million) + SK Group joint budget for social contribution 15.18 KRW(100 million)) * Regarded the input as its performance, as the corporate contribution mainly benefits the ultimate beneficiaries
	Voluntary work	0.1	0.4	0.3	<ul style="list-style-type: none"> Performance of volunteer hours 0.27 KRW 100 million (①+②+③) <ul style="list-style-type: none"> ① Simple voluntary work 2,488hrs × 2020 minimum wage in Korea 8,590 KRW ② Caring service 236.5hrs × 2020 hourly wage for level 1 (salary scale) Korean social worker 10,824 KRW ③ Talent donation 224.5hrs × 2020 average hourly wage for employees 15,556 KRW
Total	985.0	1,081.2	1,176.4		

* Eco-cost: Cost incurred to maintain the sustainability and to treat the generation of environmental hazardous pollutants that occur during the human activity of production, use and disposal of products

** In order to secure the objectivity of the standards and the evidence of monetarization of social value, we 1) only refer to objective data that is recognized by the third party, 2) apply proxy to social benefits and cost of the reporting year, 3) update proxy on a yearly-basis/comply with the internal Management Principles. In case of any unupdatable proxy, inflation rate and other factors are taken into account, and modified proxy is used to reflect the value of reporting year

GRI Index

General Disclosures

Topic	No.	Title	Page	Remarks
Organizational profile	102-1	Name of the organization	5	
	102-2	Activities, brands, products, and services	5	
	102-3	Location of headquarters	5	
	102-4	Location of operations	6	
	102-5	Ownership and legal form	5, Annual report 315	
	102-6	Markets served	7	
	102-7	Scale of the organization	5-6, 61-64	
	102-8	Information on employees and other workers	42	
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	102-10	Significant changes to the organization and its supply chain	About This Report	
	102-11	Precautionary Principle or approach	22, 24	
	102-12	External initiatives	22, 74-75	
	102-13	Membership of associations	76	
Strategy	102-14	Statement from senior decision-maker	4	
	102-15	Key impacts, risks, and opportunities	18, 22, 26, 30	
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	55, 58	
	102-17	Mechanisms for advice and concerns about ethics	55	
Governance	102-18	Governance structure	53	
	102-20	Executive-level responsibility for economic, environmental, and social topics	10	
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Topic	No.	Title	Page	Remarks
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	102-33	Communicating critical concerns	10	
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	102-36	Process for determining remuneration	54	
	Stakeholder engagement	102-40	List of stakeholder groups	10
102-41		Collective bargaining agreements	44	
102-42		Identifying and selecting stakeholders	10	
102-43		Approach to stakeholder engagement	10	
102-44		Key topics and concerns raised	10	
Reporting practice	102-45	Entities included in the consolidated financial statements	5	
	102-46	Defining report content and topic Boundaries	16	
	102-47	List of material topics	16	
	102-48	Restatements of information	N/A	
	102-49	Changes in reporting	N/A	
	102-50	Reporting period	About This Report	
	102-51	Date of most recent report	N/A	
	102-52	Reporting cycle	N/A	To be published every year
	102-53	Contact point for questions regarding the report	About This Report	
	102-54	Claims of reporting in accordance with the GRI Standards	About This Report	
	102-55	GRI Content Index	68-71	
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GRI Index

Topic-Specific Disclosures

Economic Performance (GRI 200)

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GRI 201: Economic Performance	201-1	Direct economic value generated and distributed	44, 46, 50, 59, 61-64	
	201-2	Financial implications and other risks and opportunities due to climate change	22-23	
	201-3	Defined benefit plan obligations and other retirement plans	Annual report 115-118	
	201-4	Financial assistance received from government	59, Annual report 64, 315	
GRI 203: Indirect Economic Impacts	203-1	Infrastructure investments and services supported	48-50	
	203-2	Significant indirect economic impacts	11-12, 65-67	
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	56	
	205-2	Communication and training about anti-corruption policies and procedures	55-56	
	205-3	Confirmed incidents of corruption and actions taken	57	
GRI 206: Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Annual report 366	
GRI 207: Tax	207-1	Approach to tax	59	
	207-2	Tax governance, control, and risk management	59	
	207-3	Stakeholder engagement and management of concerns related to tax	59	
	207-4	Country-by-country reporting	59	

Environment Performance (GRI 300)

Key Topic

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GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	16	
	103-2	The management approach and its components	22-23	
	103-3	Evaluation of the management approach	22	
GRI 302: Energy	302-1	Energy consumption within the organization	23	
	302-3	Energy intensity	23	
	302-4	Reduction of energy consumption	23	
GRI 303: Water and effluents	303-1	Interactions with water as a shared resource	24	
	303-2	Management of water discharge-related impacts	24	
	303-3	Water withdrawal	24	
	303-4	Water withdrawal	24	
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	16	
	103-2	The management approach and its components	22-23	
	103-3	Evaluation of the management approach	22	
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	23	
	305-2	Energy indirect (Scope 2) GHG emissions	23	
	305-4	GHG emissions intensity	23	
	305-5	Reduction of GHG emissions	23	
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	38	
GRI 306: Waste	306-2	Management of significant waste-related impacts	25	
	306-3	Waste generated	25	
	306-4	Waste diverted from disposal	25	
	306-5	Waste diverted from disposal	25	

GRI Index

 Key Topic

Topic	No.	Title	Page	Remarks
GRI 307: Environmental compliance	307-1	Non-compliance with environmental laws and regulations	37	
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	16	
	103-2	The management approach and its components	26-29	
	103-3	Evaluation of the management approach	26	
GRI 308: Supplier Environmental Assessment	308-2	Negative environmental impacts in the supply chain and actions taken	27-28	

Social Performance (GRI 400)

 Key Topic

Topic	No.	Title	Page	Remarks
GRI 401: Employment	401-1	New employee hires and employee turnover	43	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	45-46	
	401-3	Parental leave	45	
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	16	
	103-2	The management approach and its components	30-33	
	103-3	Evaluation of the management approach	30	
GRI 403: Occupational Health and Safety	403-1	Occupational health and safety management system	31	
	403-2	Hazard identification, risk assessment, and incident investigation	31-33	
	403-3	Occupational health services	33	
	403-4	Worker participation, consultation, and communication on occupational health and safety	33	
	403-5	Worker training on occupational health and safety	33	
	403-6	Promotion of worker health	33	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	20, 28-29	
	403-8	Workers covered by an occupational health and safety management system	31	
	403-9	Work-related injuries	31	
	403-10	Work-related ill health	31	

GRI Index

 Key Topic

Topic	No.	Title	Page	Remarks
GRI 404: Training and Education	404-1	Average hours of training per year per employee	43	
GRI 404: Training and Education	404-2	Programs for upgrading employee skills and transition assistance programs	43	
	404-3	Percentage of employees receiving regular performance and career development reviews	44	
GRI 405: Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	42	
	405-2	Ratio of basic salary and remuneration of women to men	44	
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	43	
GRI 412: Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	56	
	412-2	Employee training on human rights policies or procedures	47	
GRI 413: Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	48-50	
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	16	
	103-2	The management approach and its components	26-29	
	103-3	Evaluation of the management approach	26	
GRI 414: Supplier Social Assessment	414-2	New suppliers that were screened using social criteria	27-28	

 Key Topic

Topic	No.	Title	Page	Remarks
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	16	
	103-2	The management approach and its components	18, 20	
	103-3	Evaluation of the management approach	18	
GRI 416: Customer Health and Safety	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Annual report 366	No violations of the law
GRI 417: Marketing and Labeling	417-1	Requirements for product and service information and labeling	73	Output per reporting sector
	417-2	Incidents of non-compliance concerning product and service information and labeling	Annual report 366	No violations of the law
	417-3	Incidents of non-compliance concerning marketing communications	Annual report 366	No violations of the law
GRI 419: Socioeconomic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	Annual report 366	No violations of the law

* 'Product / Service Innovation(New Market/Technology),' 'Expansion of Green Products,' and 'Mutual Growth,' which have been selected as key topics in materiality assessment, are not categorized as the key topics in GRI standards.

SASB Index

Sustainability Disclosure Topics & Accounting Metrics

Topic	Category	Code	Metrics	Unit	SK materials information
Greenhouse Gas Emissions	Quantitative	RT-CH-110a.1	(1) Gross global Scope 1 emissions	tCO ₂ e	26,415
			(2) Percentage of Scope 1 emission covered under emissions-limiting regulations	%	100
	Qualitative	RT-CH-110a.2	Scope 1 emission, emission reduction targets, analysis of long-term and short-term strategy or plan against its targets	-	p.22-23
Air Quality	Quantitative	RT-CH-120a.1	(1) NOx emissions (excluding N ₂ O)	Ton	5.0
			(2) SOx emissions	Ton	0.3
			(3) Volatile organic compounds (VOCs)	Ton	Not Applicable
			(4) Hazardous air pollutants	Ton	Not Applicable
Energy Management	Quantitative	RT-CH-130a.1	(1) Total energy consumed	TJ	4,684.5
			(2) Total self-generated energy	TJ	0
			(3) Percentage grid electricity	%	89.1
			(4) Percentage renewable	%	0
Water Management	Quantitative	RT-CH-140a.1	(1) Total water withdrawn	m ³	1,031,475.5
			(2) Total water consumed	m ³	381,670*
			(3) Percentage of each in regions with High or Extremely High Baseline Water Stress	%	SK materials is operating its production plants at Yeongju-si (Korea) and Zhenjiang (China), where the Water Stress is below 40% (Medium to High).
		Quantitative	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	case
	Qualitative	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	-	p.24
Hazardous Waste Management	Quantitative	RT-CH-150a.1	(1) Amount of hazardous waste generated	Ton	964.7
			(2) Percentage recycled	%	11.6
Community Relations	Qualitative	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	-	p.40, 50
Workforce Health & Safety	Quantitative	RT-CH-320a.1	(1) Total recordable incident rate (TRIR) for direct employees and contract employees	%	SK materials manages LTIR as its main occupational health and safety metrics. (p.31)
			(2) Fatality rate for direct employees and contract employees	%	No case of fatality has been reported
		Qualitative	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	-

* Only calculated the amount of evaporated water during the consumption process, as water at SK materials is used for production purposes or is discharged through designated treatment only.

SASB Index

Topic	Category	Code	Metrics	Unit	SK materials information
Product Design for Use-phase Efficiency	Quantitative	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	KRW	SK material is providing diversified size and type of container and its valve-end-connection to customers. SK materials seeks to improve the use-phase efficiency by taking order for customized container or valve based on the usage pattern and period of customers.
	Quantitative	RT-CH-410b.1	(1) Percentage of revenue of products that contain GHS Category 1 and 2 Health and Environmental Hazardous Substances (2) Percentage of GHS Category 1 and 2 Health and Environmental Hazardous Substances containing products that have undergone a hazard assessment	% %	
Safety & Environment Stewardship of Chemicals	Qualitative	RT-CH-410b.2	(1) Strategy to manage chemicals of concern (2) Strategy to develop alternatives with reduced human and/or environmental impact	- -	SK materials does not manufacture any products that are categorized as Category 1 and Category 2 environmental hazardous substance in GHS.
	Quantitative	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	%	
Genetically Modified Organisms	Quantitative	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	%	SK materials does not manufacture genetically modified organism (GMO) containing products.
Management of the Legal & Regulatory Environment	Qualitative	RT-CH-530a.1	Corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	-	SK materials is identifying and proactively responding to the risk and opportunities that arise from the changes in environmental- and social-related regulations. Corresponding to this effort, SK materials is expanding the proportion of renewable energy use by introducing additional RE100 implementation methods such as the 3 rd party PPA system [p.22]. SK materials also seeks to reduce the direct and direct emission of NF ₃ , which is not included in the domestic GHG targets, but is already designated in international GHG targets and has a significant impact on global warming [p.23].
	Quantitative	RT-CH-540a.1	Corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	-	
Operational Safety, Emergency Preparedness & Response	Quantitative	RT-CH-540a.1	Corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	-	SK materials adopts PSM** grading system as a key indicator for process safety management. (2020 PSM grade: S-grade)
	Quantitative	RT-CH-540a.2	Number of transport incidents	Case	

* Only the quantitative data for domestic worksite is included in above numerical data

** PSM (Process Safety Management): Process Safety Management assessment scheme conducted by the Ministry of Employment and Labor (MOEL) and the Korea Occupational Safety and Health Agency (KOSHA)

Activity Metrics

Topic	Category	Code	Metrics	Unit	SK materials information
Production by reportable segment*	Quantitative	RT-CH-000.A	Speciality gas	KRW million	326,765

* Information, corresponding to trade secret, is excluded in Activity Metrics

TCFD Index

Category	Recommended Disclosures	Page
Governance	a. Describe the board's oversight of climate-related risks and opportunities	10, 53
	b. Describe management's role in assessing and managing climate-related risks and opportunities	10, 36
Strategy	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	22-23
	b. Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning	10, 18, 22
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including 2°C	10, 22-23
Risk Management	a. Describe the organization's processes for identifying and assessing climate-related risks	10, 22, 53
	b. Describe the organization's processes for managing climate-related risks	10, 22
	c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	22-23
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	18, 22-23
	b. Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	23
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	22-23

UNGC 10 Principles Index

SK materials supports, complies with, and spreads the four core values and ten principles of United Nations Global Compact (UNGC); human rights, labor, environment and anti-corruption. SK materials officially joined the UNGC in February 2021 to declare its efforts and commitments to the public. SK materials reports its activities to comply with the ten principles of UNGC in its Sustainability Report.

Category	Principles	Contents	Page
Human Rights	Principle 1	Business should support and respect the protection of internationally proclaimed human rights;	46
	Principle 2	Make sure that they are not complicit in human rights abuses.	46-47
Labor	Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	46
	Principle 4	The elimination of all forms of forced and compulsory labor;	46
	Principle 5	The effective abolition of child labour; and	46
	Principle 6	The elimination of discrimination in respect of employment and occupation.	42, 46
Environment	Principle 7	Businesses should support a precautionary approach to environmental challenges;	22-23
	Principle 8	Undertake initiatives to promote greater environmental responsibility;	22-25, 36-40
	Principle 9	Encourage the development and diffusion of environmentally friendly technologies.	7, 10, 18
Anti-corruption	Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	55-58

UN SDGs Activity

The UN SDGs (UN Sustainable Development Goals) are common goals for the international community adopted at the 70th UN General Assembly and the UN Sustainable Development Summit in 2015. SK materials identifies goals that are highly relevant to its business area to actively participate in the achievement of the UN SDGs.

UN SDGs	Objective	Key Activities of SK materials
 <p>End poverty in all its forms everywhere</p>	1.3	• Support for crime victims' laws, medical services, and employment
	1.5	• Provide Carbon Monoxide (CO) Gas Detector for vulnerable groups
 <p>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	2.1	• Provide food package for the elderly living alone in the local community
	2.2	
 <p>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	3.3	• Establishment of the Response Criteria for Employees to COVID-19, and the Business Continuity Plan (BCP) • Installation of temporary workspace to minimize face-to-face contact between workers • Provision of COVID-19 kit • Provision of COVID-19 Kit for Physical and Mental Health to vulnerable groups
	3.4	• Prevention program for diseases such as brain and cardiovascular diseases and noise-related deafness
	3.9	• Emergency Operations Center and Hazardous Gas Monitoring System • Establishment of emergency spray system against environmental accidents
	4.3	• Job experience for semiconductor materials • University-Industry cooperation program • Fostering talents in arts and sports
4.4		
4.b		
 <p>Achieve gender equality and empower all women and girls</p>	5.1	• Female employee workshop • Gender Sensitivity Self-Test
	5.5	
 <p>Ensure availability and sustainable management of water and sanitation for all</p>	6.3	• Cooling tower wastewater recycling
	6.6	• Installation of algae removal equipment in storage tank
 <p>Ensure access to affordable, reliable, sustainable and modern energy for all</p>	7.2	• RE100 campaign admission
	7.3	• Increase in power efficiency of electrolysis process • Reduction of fuel consumption such as LNG

UN SDGs	Objective	Key Activities of SK materials
 <p>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	8.3	• Operate Mutual Growth Council
	8.5	• Operate 'Happy Companion,' a standard workplace for disabled
	8.7	• Establish human rights policy
	8.b	
 <p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	9.4	• Development of renewable materials such as low-GWP gas
	9.5	• Development of ultra-pure Hydrogen Fluoride
 <p>Make cities and human settlements inclusive, safe, resilient and sustainable</p>	11.1	• Improvement of residential environments for vulnerable groups
	11.2	• School Zone Safety Campaign
 <p>Ensure sustainable consumption and production patterns</p>	12.2	• Building waste treatment process at Yeongju-si plant and at suppliers' worksite • Reduction of the use of effluent treatment drug • Introduction of dust compression facility
	12.4	
 <p>Ensure sustainable consumption and production patterns</p>	13.2	• Establish a long-term GHG reduction roadmap • RE100 campaign admission
 <p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	16.2	• Establish human rights policy
	16.5	• Establish anti-corruption compliance regulations
 <p>Strengthen the means of implementation and revitalize the global partnership for sustainable development</p>	17.16	• Admission and support for UN Global Compact

Major Association Membership

Name of Association
Korea Industry Special Gas Association
Korea Chemicals Management Association
Korea RC (Responsible Care) Council
Korea Semiconductor Industry Association
Korea Semiconductor Research Association
SEMI
Korea Display Industry Association
Korea Exchange Emissions Market Association
Gyeongbuk Branch of Korea Industrial Safety Association
Daegu Gyeongbuk PSM Safety Management Council
Safety Council of Daedeok Science Complex
Korean Society for Prognostics and Health Management
Korea Fire Safety Institute
Fire Administration Advisory Board of Gyeongbuk Fire Service Headquarters
Maekyung Safety & Environment Institute
Korean Nurses Association
Fair Competition Federation
Security Cooperation Committee of Yeongju-si Police Station
Security Advisory Council of Yeongju-si Police Station

Independent Assurance Statement

To readers of SK materials Sustainability Report 2020

Introduction

Korea Management Registrar (KMR) was commissioned by SK materials to conduct an independent assurance of its Sustainability Report 2020 (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of SK materials. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with SK materials and issue an assurance statement.

Scope and Standards

SK materials described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with the Core Options of the GRI standards was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process. We also confirmed that the report was prepared in accordance with the TCFD recommendations and SASB.

- GRI Sustainability Reporting Standards
- Universal standards
- Topic specific standards
 - Management approach
 - GRI 302: Energy
 - GRI 305: Emissions
 - GRI 308: Supplier Environmental Assessment
 - GRI 403: Occupational Health and Safety
 - GRI 414: Supplier Social Assessment
 - GRI 416: Customer Health and Safety
- SASB Sustainability Disclosure Topics & Accounting Metrics
- TCFD recommendations

As for the reporting boundary, the engagement excludes the data and information of SK materials' partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Independent Assurance Statement

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by SK materials to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with SK materials on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the Core Option of the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity

SK materials has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

SK materials has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

SK materials prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of SK materials' actions.

Impact

SK materials identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with SK materials and did not provide any services to SK materials that could compromise the independence of our work.

June 2021 Seoul, Korea

