



MATERIAL TOPIC

Safety & Health at Our Business Sites

Link to SDGs

- [Goal 3] Good Health and Well-Being**
 - 3.9 Reduce death and diseases caused by hazardous chemicals and pollutants
- [Goal 12] Responsible Consumption & Production**
 - 12.4 Minimize the negative impact on health and the environment




Opportunity

There is an increasing social demand for the safety of the members of our local community and suppliers as well as our employees. Therefore, it is important to set safety and health standards to meet not only regulatory requirements but also the demand from our stakeholders. OCI raises employee awareness of safety through strict control of chemical substances and effective training and campaigns. From a long-term perspective, we are creating a more safety-oriented work environment to increase productivity and build a reputation for safety.

Risk

Safety management has a major impact on our financial and non-financial performance. As a high-risk chemical industry, safety accidents could result in fire, explosions or chemical leakages causing massive damage to the local community and business sites. At the same time, we must respond to an increasing demand for the disclosure of information from our stakeholders. To this end, we are committed to preventing safety accidents through our safety and health management system while minimizing the impact, in case of an emergency, through an emergency response system.

Education for Safety and Health

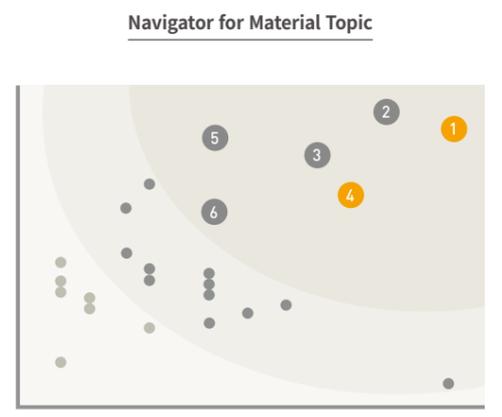
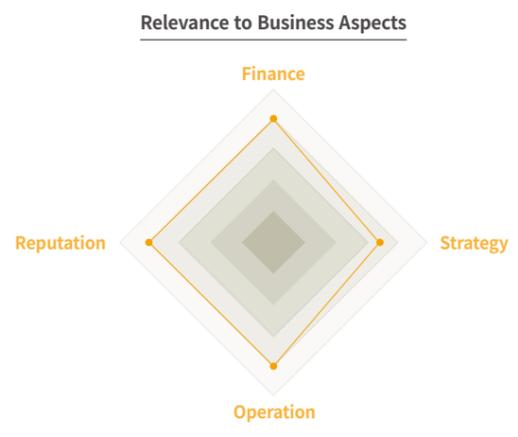
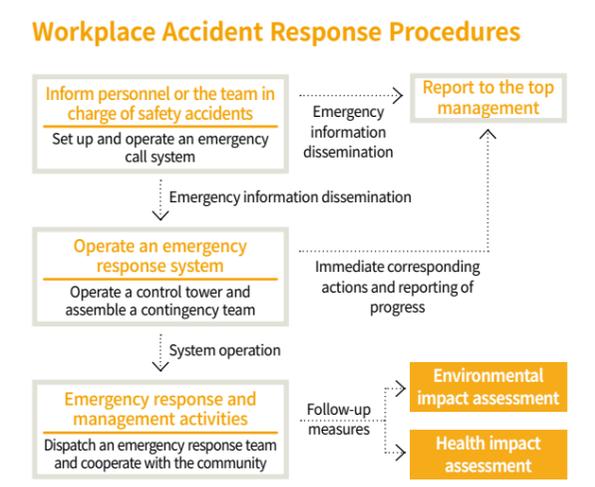
Commissioned training for safety management of processes and health management

Targeting all employees involved in safety and health at OCI and suppliers

Company-wide training on the process and risk assessment of equipments

Targeting all employees involved in hazardous facilities at each business site

Training Hours (per person and year)			
Gunsan	40 hours	Iksan	24 hours
Pohang	44 hours	Iksan VIP	24 hours
Gwangyang	40 hours	R&D Center	24 hours



Financial Impact of Material Issues

NO.	Material Issue	Impact	Financial Impact		
			Revenue/Cost	Assets/Liabilities	Cost of Capital
1	Prevent accidents through workplace safety management	HIGH	●	●	
4	Minimize emissions of hazardous chemicals	HIGH	●	●	●

Implementation Tasks by Material Issue

Material Issue	Short-term Tasks	Mid-to Long-term Tasks
Prevent accidents through workplace safety management	• Identify and remove risk factors continuously	• Raise safety awareness and build a voluntary safety management system
Minimize emissions of hazardous chemicals	• Ensure compliance with the laws (e.g. Act on Registration, Evaluation, etc. of Chemicals, Chemical Control Act)	• Improve hazardous chemical handling facilities and strengthen the control system

Stakeholder Opinions

“As a chemical manufacturer and vendor, it is important for all employees to prioritize the impact of our products and production activities on society in addition to observing regulatory compliance.”

“We must create a portfolio to prevent safety accidents in advance, and replace outdated facilities according to the safety standards.”

Safety & Health System

Certifications for Safety & Health Management System

Business Site	Certification
Gunsan	OHSAS 18001
	KGS 18001
	KOSHA 18001
Pohang	KOSHA 18001
Gwangyang	OHSAS 18001
Iksan	KOSHA 18001

Safety & Health Management

We ensure that our safety and health management system is on par with global standards in order to build a safe and healthy work environment. We establish our safety, health and environmental strategies based on the ISRS (International Safety Rating System), and make sure that our management system, certified in accordance with each business site's characteristics and local communities, conforms to global standards. We will expand the scope of the certification to our suppliers as well as overseas business sites to ensure the safety of our employees and the local community.

Safety Technology Committee

The Committee, organized with technical experts in each field, reviews the technical aspects of safety to prevent safety accidents in case of any unusual conditions during plant operation. Based on the result of these reviews, necessary safety measures are taken, such as the shutdown of operations.

Emergency Response System

We carry out regular emergency drills to minimize damage in case of emergency situations. They allow us to respond to, and take control of, the situations in a timely manner and ensure that our employees are trained and equipped to handle any situation. Furthermore, we provide emergency drill manuals for local residents and work with them to avoid any damage in local communities.

Work Permit Process

We run the work permit process, where work is permitted based on the result of risk assessment, in order to remove potential risk factors and strengthen supervision in the business site. By reviewing actual risk factors through detailed work permits and enhancing safety training, we raise our employees' safety awareness and prevent safety accidents.

Emergency Drill Program (Unit : Session)

Business Site	2015	2016	2017
Gunsan	360	273	296
Pohang	122	124	122
Gwangyang	84	90	98
Iksan	51	40	30
Iksan VIP	7	7	7
R&D Center	51	49	47



1. Emergency drill (Gwangyang)
2. Training coordinated with the fire department (Pohang)



Safety & Health Management for Suppliers

We recognize safety as the most important aspect of our business practice; therefore, we apply the same safety standards to our suppliers through a safety management system. We understand the risks on site through stringent safety related meetings with our suppliers. Additionally, we raise workers' safety awareness through realistic and effective safety trainings. Based on this partnership and cooperative culture, we would like to create a healthy corporate eco-system and sustainable supply chain, preventing workplace accidents.

Core Elements



Internalizing the Safety & Health of Suppliers

We provide safety and health induction training for the employees of our suppliers. While organizing specific safety training programs for each worker, we keep them informed of the latest safety, health and environmental issues and new regulatory requirements to ensure legal compliance. In addition, we support risk assessment and inspect the work process with their representatives to identify and remove risk factors in advance.

Safety and Health Induction Trainings for Suppliers

Recipients	Contents	Performance
Employees of suppliers	Basic safety rules in business sites and safe operations according to the type of risks in each process, etc.	Frequent
Drivers at transport companies	Risks of hazardous chemicals transportation and guidelines for handling emergency situations	Once/quarter
Sales partners	Legal requirements for selling hazardous chemicals, etc.	Once/year



1. Safety inspection for transporters (Pohang)
2. Safety training (Iksan)

Safety & Health Culture

Raising awareness of Safety & Health Culture

We consider the safety and health of our employees and local community as our top priority. In line with this approach, we build a positive safety culture by organizing safety and health training programs and engaging in various activities to raise awareness of our employees.

Enhanced Safety & Health Training

In addition to the legally required safety training, we organize internal safety training programs and hire outside training service providers to raise employee safety awareness. In 2017, a total of 30 engineers completed the HAZOP (Hazard & Operability Study) training program which is required on a corporate-wide level.

Communication

We are actively raising awareness in safety and building a mature safety culture through active and open communication. The CEO sends out a safety message which directs our employees' attention to safety every month, and establishes communication channels between managers and workers as well as between the HQ and plants to pursue constant improvement and engagement.



CEO's safety message



SH&E reward system (Gunsan)

Program	Performance
CEO's Safety message	<ul style="list-style-type: none"> Sent to employees every month Shares thoughts and attention on safety on a corporate-wide level
SH&E Leaders Workshop	<ul style="list-style-type: none"> Quarterly workshop for managers in charge of safety, health and the environment in the HQ and division heads in plants Shares exemplary cases among business sites and promotes communication between HQ and the plants
SH&E Excellence Award	<ul style="list-style-type: none"> The CEO gives awards to teams that achieve significant improvement in safety, health and the environment Winners are selected based on internal reviews, on-site inspections and executive evaluations
SH&E Reward System	<ul style="list-style-type: none"> Rewards employees who identify and remove risk factors in safety, health and the environment
PSM (Process Safety Management) App	<ul style="list-style-type: none"> Shares MSDS (Material Safety Data Sheet) and an emergency response manual on mobile devices Includes 12 PSM/SMS requirements and important information from the Occupational Safety and Health Act

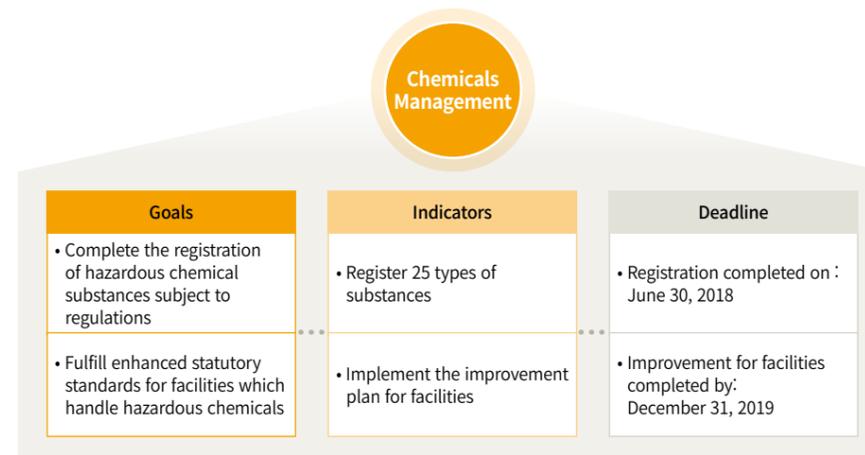
Internal Reviewer

Our Internal Review System is designed for certification and maintenance of the SH&E Management System. Each business site conducts an internal review in accordance with the review plan every year, and the qualification requirements for internal reviewers are specified in the company regulations while their training is conducted in cooperation with external training organizations. In 2017, a total of 16 certified reviewers carried out reviews on process, performance and improvement activities.

Hazardous Chemical Management

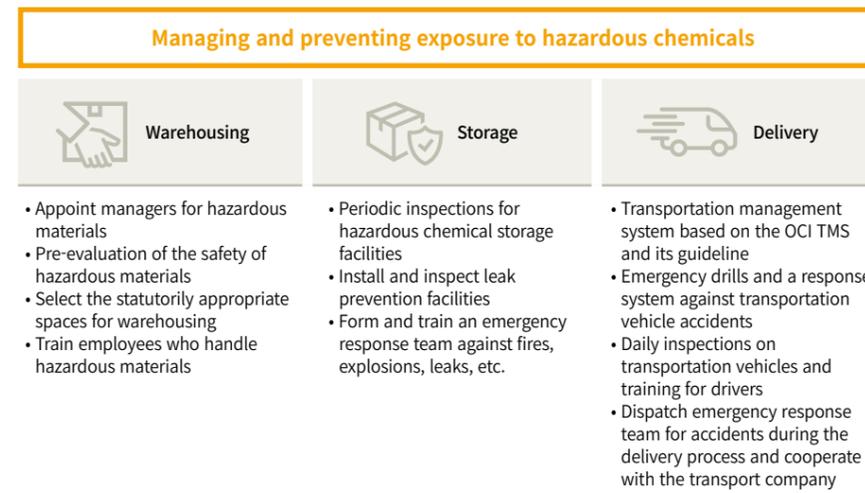
Management System

In response to demands for information about product risks and hazards from stakeholders and increasing regulatory requirements, we have built a hazardous chemical management system to minimize its impact on the environment and health and identify risks in advance through risk assessment.



Enhanced Management

Throughout the entire work process from warehousing to use and disposal, we maintain strict control of chemical substances by removing risk factors and increasing safety through assessment, training and regular inspection.



Hazardous Chemical Management

Response to Regulations & Legal Compliance

We ensure full compliance with new safety and health laws and regulatory requirements including the Occupational Safety and Health Act, Act on the Safety Control of Hazardous Substances, High-Pressure Gas Safety Control Act and Waste Control Act as well as ISO 14001. In response to the legislation of the Chemicals Control Act and Act on Registration, Evaluation, etc. of Chemicals in 2015, we established a mid- to long-term master plan based on which we designated legal managers and organized training for workers who handle hazardous substances to meet the legal requirements. In addition, we share and disclose material safety data sheets (MSDS) for chemical substances we use in accordance with the Occupational Safety and Health Act. We also take initiatives to ensure compliance with REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) and RoHS (Restriction of Hazardous Substances) in line with strengthened international environmental regulations.

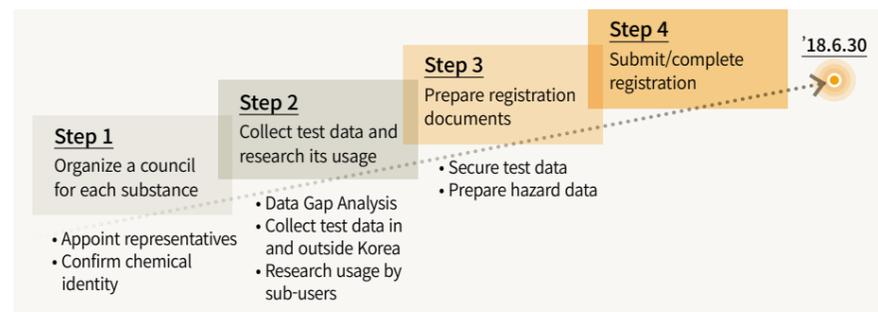
Responding to Regulations on Chemicals

Environmental Management	Supply Chain Management	R&D	Business Operation	Production/Quality
<ul style="list-style-type: none"> Review laws and regulations and set R&R on chemical substances Cooperate and undertake external work regarding chemical substances Apply laws and regulations, inspect/maintain facilities and conduct training by business site 	<ul style="list-style-type: none"> Check and follow up on import of chemical substance Manage exporters (information requests and management) 	<ul style="list-style-type: none"> Manage chemical substances for research Analyze chemical compositions Prepare the chemical composition sheets 	<ul style="list-style-type: none"> Manage chemical-related data and information Manage the volume of warehousing /shipping and import/export Review newly-handled chemical substances in advance 	<ul style="list-style-type: none"> Comply with chemical handling procedures and maintain facilities Prepare and manage MSDS/chemical composition sheets

Registration of Chemical Substance Data

In response to the Act on Registration, Evaluation, etc. of Chemicals, we have completed the registration of chemical substance data by June 30, 2018. In particular, we maintain close and continuous consultation with the Korea Petrochemical Industry Association, National Institute of Environmental Research and GLP (Good Laboratory Practice) for the registration process.

Registration Process



SPECIAL PAGE

Chemical Leak at the Gunsan Plant

In June 2015, a worker inhaled hazardous gas due to a silicon tetrachloride leak at the Gunsan plant and returned to work in full health after treatment. Fifteen residents complained of skin irritation and headaches, but there were no cases of organ damage requiring additional treatment. After the accident, we organized a task force for facilities maintenance and improved the gas monitoring system as part of preventive and initial response measures. Furthermore, we are taking follow-up measures on health and environmental impacts on the local community. In the future, we will make every effort to prevent safety accidents at every site by improving our maintenance while reviewing each facility and keeping track of their history.

Handling and Preventing Chemical Accidents

Health impact assessment and management of an estimated group with health issues

Activities to avoid workplace accident

We carried out a health impact monitoring process and provided medical treatment for local residents who may be subject to potential impacts. Health consultation was provided at the Hwasun Hospital of Chonnam National University to maintain close communication with local residents. As a result, no unusual medical conditions were observed that were assumed to be related to exposure.

We have called a Safety Technology Committee to check any possibility of leak and accidents. We also conducted emergency response drills 296 times including Emergency Rescue Control Headquarters' unannounced mobilization drills for emergency rescue in cooperation with 10 organizations such as Gunsan City and the fire department. In addition, we have an emergency contact system for local residents and provide gas masks for any emergencies.

