

# KUREHA CSR REPORT 2014



**KUREHA CORPORATION** 

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# **Editorial Policy**

# To All Readers of Kureha CSR Report 2014:

Kureha CSR Report 2014 was prepared for the purpose of reporting the Kureha Group's Corporate Social Responsibility (CSR) initiatives and activities during the fiscal 2013. This English report has selective information from Kureha CSR Report 2014 published in Japanese, and includes company overview, information on the Kureha Group's efforts and activities related to community relations, environmental protection and labor safety as well as their relevant examples and data. Since Kureha is a chemical company, special emphasis has been placed on the information related to its Responsible Care (RC) activities and performance (On page 6).

# Companies covered in this report

### **■CSR Activities**

Kureha Corporation and its 36 subsidiaries and 1 (equity method) affiliate

### ■ Responsible Care Activities

Kureha Corporation and its 13 subsidiaries

- Kureha Corporation
- Kureha Extech Co., Ltd.
- Kureha Gohsen Co., Ltd.

- Kureha Unyu Co., Ltd.
- Kurehanishiki Construction Co., Ltd.
- Kureha Engineering Co., Ltd.
- Kureha Ecology Management Co., Ltd.
- Kureha Special Laboratory Co., Ltd.
- Kureha Extron Co., Ltd.
- Resinous Kasei Co., Ltd.
- Kureha Advanced Materials LLC
- Krehalon Industrie B.V.
- Kureha Chemicals Shanghai Co., Ltd.
- Kureha Vietnam Co., Ltd.

### **Reporting Period**

In principle, the reporting time frame for Kureha's CSR activities is same as its accounting period (from April 2013 to March 2014). However, some sections of this report may refer to calendar year (from January 2013 to December 2013) or activities after April 2014.

# Reporting Guidelines

- ISO26000
- Ministry of Environment "Environmental Report Guidelines (2012 edition)"
- Ministry of Environment "Environmental Accounting Guidelines (2005 edition)"

### **Date of Publication**

December 2014

# Corporate Identity

Mission

The pursuit of excellence



Corporate philosophy

- •We treasure people and the natural environment
- We constantly evolve through innovation
- •We contribute to society by developing beneficial products



Employee code of conduct

We always act as global corporate citizens, recognizing our corporate social responsibilities.

- •In relation to our clients: Customer satisfaction is our prime priority
- •In relation to our work:

We will always pursue progress and innovation

We will maintain a global perspective as we respond to change In relation to our colleagues: Mutual respect and teamwork will always be fundamental to

sound employee relationships

# Top Message

Ever since our founding in 1944, Kureha has sought to grow together with society. We have used our proprietary technologies and world-leading innovative capabilities to create specialty products that improve people's lives and benefit the global environment. As we celebrated our 70th anniversary this June, I would like to thank everyone who has helped us reach this milestone.

Kureha's corporate philosophy has three central tenets: we treasure people and the natural environment, we constantly evolve through innovation, and we contribute to society by developing beneficial products. Based on these

principles, under Grow Globally II, our mediumterm business plan for fiscal 2012- 2015, we have steadily proceeded with promoting global growth of our existing businesses while cultivating and expanding new businesses.

As a chemical company, it's our responsibility to continually make products that are necessary and beneficial for society. Kureha makes pharmaceutical products that will contribute to human health and agricultural chemicals, food packaging materials and home products that help to improve crop yield and effective use of food resources. Meanwhile, PGA (polyglycolic acid) and other high-performance polymers as well as carbon products and battery materials play an essential role in promoting the efficient use of energy and energy saving in today's society. In addition, the environmental services and analysis programs operated by Kureha group companies can bring direct benefits to environmental preservation and people's health.

As a responsible corporate citizen, we also recognize the importance of creating employment opportunities for people with disabilities. We have actively employed challenged individuals over the years, and to further strengthen our effort, we have established a new company called "Sunshine Kureha" in Iwaki, Fukushima Prefecture, just last June. We continue to promote the social participation and independence of people with challenges through this establishment.

On top of making profits and enhancing corporate value as a company, Kureha has a mission—to be an essential part of the lives of all its stakeholders. With passion and speed, we will continue to pursue advanced manufacturing that brings continued prosperity to society and the world, and build Kureha into a truly global corporation.

We at Kureha will continue to pursue excellence in everything we do. We look forward to your continued support.

October 2014

With passion and speed, we continually pursue an excellent company that will deliver value to all our stakeholders.

小林豊

President & Chief Executive Office

# Profile of the KUREHA Group

The Kureha Group is engaged in the manufacturing and sales of functional materials, specialty chemicals and plastics for its main businesses. In addition, it also undertakes construction and maintenance operations associated with each main business, as well as transport operations, environmental management services and other service operations. Kureha products spread widely in the lives of people, from specialty plastics used in electrical and electronics products and automobiles to kitchen-use wrap films and pharmaceutical products including anti-cancer agent and chronic kidney disease drug.

# ● Corporate Profile (As of March 31, 2014)

Corporate Name KUREHA CORPORATION
Head Office 3-3-2 Nihonbashi-Hamacho,
Chun ku, Tokyo 103 8552

Chuo-ku, Tokyo 103-8552 President Yutaka KOBAYASHI

Chief Executive Officer

Incorporated June 21, 1944

Capital ¥12,460 million

Net Sales ¥148,124 million (March 2014)

Business Outline Manufacturing and sales of functional materials, specialty

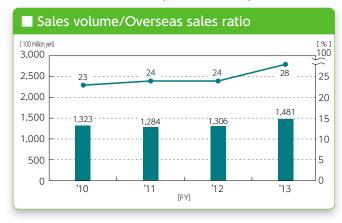
chemicals and plastics

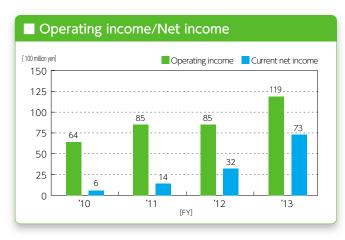
Number of Employees 4,080 (Consolidated)

1,715 (Non-consolidated)

URL http://www.kureha.co.jp/

# Financial Information (Consolidated)





### Business Overview

### [Advanced Materials]

Advanced materials created with Kureha technologies help support a wide range of pioneering industries. <Products>

Advanced plastics (polyphenylene sulfide, polyvinylidene fluoride, polyglycolic acid), carbon products

# [Specialty Chemicals]

Our specialty chemicals contribute to public health, advancements in agriculture, and the growth of various industries.

<Products>

pharmaceuticals, agrochemicals, Industrial chemicals

# [Specialty Plastics]

Kureha products are present in our daily lives and leisure activities, enhancing convenience and safety in a variety of ways.

<Products>

Food packaging materials, household packaging products

## [Construction and Other Operations]

Kureha Group businesses including construction, engineering, environmental protection, logistics, and trading companies

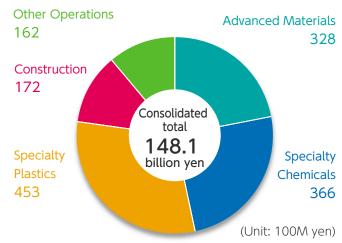
<Services>

Construction, environmental engineering, transport/warehousing, and trading related businesses

# OGroup companies (As of March 31, 2014)

36 consolidated subsidiaries

# ■Net sales by segment (FY2013)





Kureha marks the 70th anniversary of the company's foundation in 2014:

# A proud history of Kureha's original technologies

Kureha is a diversified chemical products manufacturer that has applied its technological development expertise to create numerous original products. Based on a spirit of "Broad Base, But Specialty", we operate with a broad vision encompassing industry-wide issues, while at the same time using highly specialized expertise to develop cutting-edge products. We pride ourselves with a fact that Kureha's growth and development has come exclusively from producing innovative products developed in-house, rather than using outside technology. As an entrepreneur looking to the future, we have continually taken on the challenges of developing new technology and cultivated a culture within the company that promotes the creation of next-generation products, thereby shaping the history of Kureha's original, innovative technology.



# The foundation of Kureha Chemical Industry

Kureha Chemical Industry Co., Ltd. is established and begins producing agricultural fertilizers and inorganic

chemicals such as caustic soda and synthetic hydrochloric acid.

1950





# Transforming into a specialty company

In a socioeconomic upheaval after the oil crisis, Kureha strengthens its focus on high added-value businesses, including activated carbon

products, polyvinylidene fluoride resins and fishing lines.





# Restructuring Kureha with new products and technologies

Kureha moves into the energy and environment sectors by introducing anode materials and binders used for lithium-

ion batteries (LiB). In the pharmaceutical sector, a therapeutic agent for chronic kidney disease is launched.



1960

1970

1,980

1990

2000

2010



# Advanced utilization of chlorine – PVC and PVDC films

Production of polyvinyl chloride (PVC) and polyvinylidene chloride (PVDC) begins, followed by the commercialization of PVDC-

based household wrap, food packaging film and automatic packing machines.





# Expansion of specialty businesses

Development of high added-value businesses is accelerated by advanced technology and know-hows. Kureha

begins production of polyphenylene sulfide (PPS) resins and also launches NEW Krewrap, an upgraded version of Krewrap.



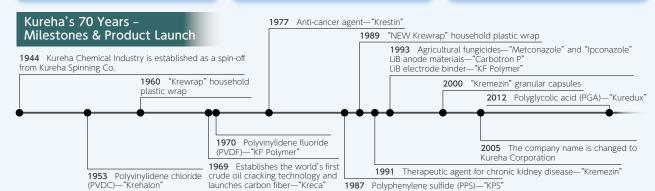


# New name, New Mission

Kureha changes its name to Kureha Corporation and accelerates its global expansion. The corporate identity, vision

and ethics are clearly defined to unify the company operations worldwide. Kureha commercializes polyglycolic acid (PGA), a biodegradable resin.





# Community relations

In pursuing a "harmonious coexistence with the community", Kureha strives to maintain active communication with local communities and is dedicated to their development and success.

Kureha publishes a newsletter "Nishiki" to promote interactive communication with local communities, which includes the report on Kureha's environmental and safety initiatives and activities and also voices and requests from local communities. The newsletter FY2013 issues featured our CSR Local Dialogue Meeting and Kureha Sports Festival, in which events many people from neighboring communities also participated. Also, this year Kureha organized the Iwaki Factory tours, volunteered in street cleanup programs, and supported the ongoing post-quake recovery support project, "Smiling Together."

# ■ 11th CSR Local Dialogue Meeting

On November 20, 2013, 126 persons, including representatives of administrative institutions, local groups, district officials and nearby corporations attended the 11th CSR Local Dialogue Meeting.

In the meeting, the members of the Iwaki Factory introduced the concept for their FY2013 CSR efforts titled "Building a safer workplace," and explained their responsible care activities and safety traditions which they carry on at workplace. Kureha Ecology Management Co.,Ltd. also presented their RC activities and performance.

In addition, the Fukushima Prefecture Environment Center Planning Management Office gave a lecture titled "Chemical Substance Risk Management". Furthermore, valuable opinions and questions were raised by many of the local attendees.

# KUREHA RECORDING RE

11th CSR Local Dialogue Meeting (Held November 20, 2013)

# **Social Contribution**

# Smiling Together

# - The East Japan Support Project

The earthquake and tsunami from the Great East Japan Earthquake of March 2011 caused considerable damage to the Pacific coastal region of eastern Japan. The prefectures of Iwate and Miyagi, as well as Fukushima where Kureha's Iwaki Factory is located, suffered loss of life, the destruction of homes, salt damage to agricultural lands from seawater, and damage to sales of agricultural products caused by harmful rumors and misinformation relating to the nuclear accident. Restoration and reconstruction in these areas remains a pressing concern.

Kureha is providing financial support for three projects aimed at revitalization of food and agriculture in the disaster areas—the Nanohana Project, the Agriculture Revitalization Project, and the Rebuilding of Culinary Culture through Community Support Project. These three projects, directed respectively by Tohoku University, Fukushima University, and Iwate Prefectural University Morioka Junior College, conduct activities in which students and residents of disaster areas work together for restoration.

Kureha has been donating a portion of its revenue from sales of NEW Krewrap to aid these projects since October 2011, and will continue to provide reconstruction support to the disaster areas.

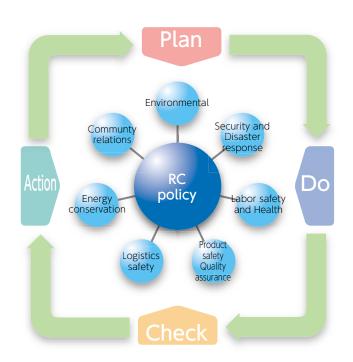
The contribution amount over three years is projected to reach about 100 million yen.



# Responsible Care

Kureha, an inaugural member of the Japan Responsible Care Council founded in 1995, continues to pursue Responsible Care initiatives to improve health, safety and environmental performance throughout its operations. We regard our commitment to Responsible Care as an integral part of our corporate responsibility.

The Kureha Group, under the direction of the All Kureha Responsible Care Committee, strives to improve its performance in terms of environmental protection, security and disaster response, labor safety and health, product safety and quality assurance, logistic safety, energy conservation and community relations. In line with ISO 14001, the international standard for environmental management, ISO 9001 for product quality management as well as OHSAS 18001 for labor safety and hygiene management, the Company's responsible care activities are continually enhanced through a "plan, do, check, act" activity cycle.



# **Environmental Report**

The Kureha Group is actively engaged in efforts that take into consideration the various effects on the

environment, including reduction of greenhouse gas emissions, prevention of air pollution, prevention of water pollution, and reduction of industrial waste discharge volumes, etc.

# FY2013 Environmental Load Profile

# Water Equivalent to crude oil 23 million m<sup>3</sup> **Raw Materials** 146 million liters **KUREHA** Atmospheric Emissions

Input

# Output

Energy

Waste materials for land fill

<sup>\*\*</sup> Chemical substances that are subject to the Pollutant Release and Transfer Register (PRTR), a national environmental database of potentially hazardous chemical substances and/or pollutants released to air, water and soil and transferred off-site for treatment or disposal.

# **Environmental Management**

# **Environmental Management**

25

1990

2009

2010

# **Environmental Management**

Kureha strictly monitors the amount of gas emission, energy use, environmentally hazardous substances emitted in the air and water as well as waste water generated from our facilities, and makes continual effort to mitigate the negative effects on the environ-

# Reduction of greenhouse gases

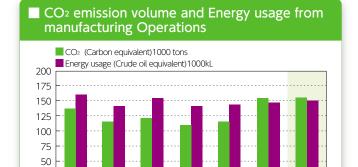
With an aim to streamline energy use and prevent global warming, Kureha's Energy Management Committee aggressively promotes the implementation of energy-saving equipment and relevant initiatives and activities leading to energy conservation in every aspect of operation. While the volume of energy use and carbon dioxide emission during FY2013 decreased in the office areas as well as in the Plastic Processing Factory, the company-wide volume resulted in a slight increase from the previous year.

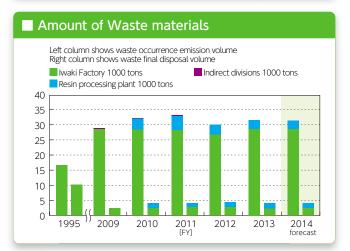
### Reduction of Industrial waste emissions

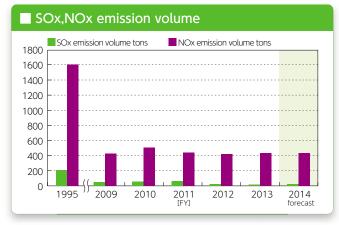
At the Iwaki Factory, with startup in 2006 of boiler using coal fuel, the amount of waste increased in the form of coal cinders and ash, but this was recycled as raw material for cement. In the Plastic Processing Factories, reduction of waste volumes has progressed through improvement in product yields, advanced efforts with waste material separation and material recycling.

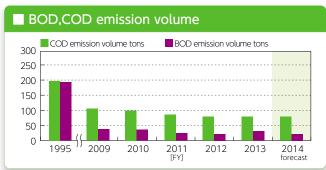
# Prevention of air pollution and water contamination

During FY2013, the emission volume of SOx, NOx, COD and BOD was appropriately managed under a level set voluntarily by Kureha and as agreed by local authorities. This was enabled by continuing facility improvement and realizing stable operation of our manufacturing plants.









# Safety and Disaster Prevention

Safety and disaster prevention are among the most important responsibilities of a chemical manufacturing company. Kureha manages its facilities and operations in strict compliance with relevant laws and regulations as well as voluntary safety standards set to best protect its employees and community. Moreover, in order to enhance our preparedness for emergent situations, comprehensive safety and emergency drills are regularly implemented at our plants, in addition to various safety training held in each manufacturing section throughout the year.

# ■ Disaster prevention and emergency drills ① The Iwaki Factory

On October 29, Kureha conducted a comprehensive disaster prevention and emergency drill at the Iwaki Factory, with an assumption that an earthquake of seismic intensity of 6 lower occurred in the Iwaki area. About 1,450 employees of the Kureha Group participated in the drill, which included a simulation exercise to fight against a fire caused by chemical leak. Kureha members also put in practice the lessons learned from the Great East Japan Earthquake back in 2011 and performed all the exercises swiftly and efficiently. The whole drill was conducted under the supervision of 27 officials and members from the Iwaki City Fire Department, the Iwaki City South Police Department, the Iwaki City Environment Monitoring Center and also nearby community districts.

# 2 The Plastics Processing Factory

A major disaster prevention and emergency drill was held at the Plastics Processing Factory in Ibaraki Prefecture on April 26. The members of local fire departments supervised the entire drill and confirmed that the factory's fire protection equipment and disaster prevention management were all in place and well-functioning. In the drill, use of electric transceivers was newly adopted so as to facilitate communication among disaster management members in and outside the factory.

# ■Top management inspection for disaster prevention measures

Kureha continues to seek uncompromising standards for security and safety at our manufacturing plants. On September 6 at the Iwaki factory, annual disaster prevention inspection was conducted by Kureha's CEO and Responsible Care Committee members. They walked through the plant and observed the safety and disaster prevention activities demonstrated at all the manufacturing facilities. They also participated in the emergency drill themselves, assuming a large earth-quake and an incident of gas leak, and confirmed safety and disaster preventions measures at first hand.



Comprehensive disaster prevention and emergency drill at Iwaki Factory



Comprehensive disaster prevention and emergency drill at Iwaki Factory



Inspection of disaster prevention drill at Iwaki Factory



Disaster prevention and emergency drill at Plastic Processing Factory (Ibaraki)

# Labor Safety and Health

Kureha recognizes labor safety and health as being an important management issue, and is performing various activities for the purpose of the no accident nondisaster. Number of labor accidents Class3 or worse, Labor accident frequency rate\*1 and Labor accident severity rate\*2 which are the indices of work safety were zero in calendar year 2013.

# Labor accident frequency rate and Labor accident severity rate in CY2013

Factory	Labor accident frequency rate	Labor accident severity rate		
lwaki Factory	0	0		
Plastics Processing Factories	0	0		
Japanese Chemical Industry **3	0.82	0.12		
Japanese plastics products fabricator **3	0.98	0.02		

- \*\*1 Labor accident frequency rate = (number of deaths and injuries in occupational accidents/total work hours) × 1,000,000
   \*\*2 Labor accident severity rate = (days of labor lost/total work hours) × 1,000
   \*\*3 Factories 100 or more employees

At the Iwaki Factory, all safety activities the 5S campaign for executing Seiri (streaming), Seiton (organizing), Seiketsu (hygiene), Seisou (cleaning), and Shituke (discipline), the pointing and calling campaign, risk prediction activities, etc. have been deployed under the supervision of the Accident Prevention Committee and the Safety and Health Committee. In addition, beginning in FY2004, the Occupational Health and Safety Management Systems (OHSAS18001) was introduced and incorporated into the workplace to ensure safety. In FY2013, our ongoing risk assessment was strengthened under the program called "Campaign to Reduce the Risk of Personal Accident Occurrence", in which many potential risks were extracted and addressed by improving our facilities. This program has been extended for another three years and is still ongoing to make additional safety improvements.



Special lecture meeting

Similarly, at the Plastics Processing Factory, "Campaign to Reduce the Risk of Personal Accident Occurrence" was promoted since FY2013. Risk prediction sessions, participation in safety facility experience education, and safety and health patrols are continuing.

# Skills Training Center

At the Iwaki Factory, efforts are made to boost awareness of safety and disaster prevention, and labor safety and health, at both the Group companies and cooperating companies, for unified effects at reducing labor disasters and accidents. As part of these efforts, the Skills Training Center where simulated risks can be experienced was opened in November 2005, and it reached its ninth year of operation in November 2013.

In FY2013, rescue experiential training and first-aid experiential training was implemented targeting the employees at the Iwaki Factory, and in Group companies, with about 1,200 persons receiving training. Safety education was also performed at plant sites other than the Iwaki district, at Group companies, and at nearby corporations and group organizations, for anyone desiring the experience. The total number of users at Kureha and Group companies, from the outset until end-March 2014, was about 19,200 persons.

New experiential training is being considered, to bring even more persons into training in the future.



First-aid experiential training

# **Quality Assurance**

To obtain further satisfaction from customers, we have instituted four principles in our quality policy: we strive to improve the quality of products and services, we strive to provide safe products to customers and to have them safely used, we strive to ensure safety and disaster prevention, and we strive for stable provision of products. Based on these principles, we set quality targets in each department and division each year, and perform progress management.

# Product Safety and Quality Assurance

To provide safe products to customers, we perform new product safety inspections spanning product design, raw materials purchases, product quality, and packaging standards. In addition, in regards to product appearance in the market, we perform strict screening from the perspective of package displays, advertising and commercials, Safety Data Sheet, and intellectual property rights.

In addition, we actively seek quality audits of Kureha from customers. We implement definitive improvements of the Kureha manufacturing process based on indications and opinions given from the customers, and strive to improve product safety through reduction of the factors that engender complaints.

Through suitable operation of the Kureha Quality Management System, we are seeing a steady decline in the number of complaints received from customers.

In the Home Products Division, we issue declarations of conformance for activities corresponding to the "Guidelines for complaints handling in organizations - ISO10002/JIS Q10002". In future, we will aim for improved customer satisfaction, and strive for continual improvement of the customer response process.

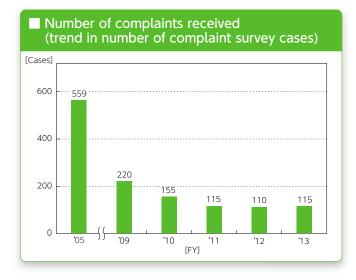
# **Overseas Chemical Substance Regulations**

With increasing globalization, we are responding firmly to chemical substance regulations in Japan and overseas. Application of the new chemical product regulations in Europe (REACH\* regulations) started on June 1, 2008. In these regulations, registration procedures are required in the EU for businesses that handle the manufacture or import of substances at a level of 1 ton or more annually. Kureha is proceeding appropriately with registration of the target substances.

\*\*REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (European Chemical Regulations)

# **Congo Conflict Minerals**

In regards to conflict minerals (gold, tantalum, tungsten, tin) handled by inhumane armed groups in the Democratic Republic of the Congo and surrounding countries, Kureha and the Kureha Group companies recognize the gravity of the Congo conflict minerals issue in relation to the human rights issue, and have adopted a policy of not using these conflict minerals, or other raw materials that contain these minerals.



# Summary table for RC activities

Areas	Goals	FY2013 Plan	FY2013 Performance	Self- Evaluation
Overall RC management	Continuing improvement of RC activities	Enforce RC management     Actively address issues of individual department	Performed internal audit for the attainment level of RC targets in all manufacturing plants & offices  Passed screenings for updated QMS and current EMS/OHSAS systems	**
	Reduction of atmospheric emission of chemical substances	Reduce emission of PRTR substances*1, dust, VOC, odors and other hazardous substances	PRTR substances emission totaled 76 tons, a 15 ton decrease from FY2012 Maintained strict controls over exhaust gas treatment facilities No odor complains reported	***
Environmental protection	Improvement of discharged water quality	Enhance management of discharged water quality	Maintained safe operation at central discharged water treatment facility     Continued voluntary discharged water management at each plant exit	***
	Proper management and reduction of waste materials	Execute mid-term waste reduction plan and promote recycling	Industrial waste materials increased by 1,300 tons, and final disposal volume decreased by 400 tons     Improved the material recycling rate     Audited two outsourcing contractors for waste disposal	**
Security and Disaster prevention	Zero serious facility accidents	Achieve operational safety in all manufacturing divisions for 250 consecutive days or more	Achieved continuous safety operation for over 250 days at all manufacturing plants     Improved emergency response capability by disaster prevention training, etc.	***
Labor safety and health	Zero accidents to cause serious personal injury	Achieve zero accidents to cause Class 3 or worse personal injury*     Implement measures for all avoidable risks picked up by the Risk Extraction process (CY2013)	No Class 3 or worse accidents occurred  Accomplished zero accidents and zero facility disasters:  For 17 consecutive years at Head Office Annex, Food Packaging Technology Center  For 9 consecutive years at all research laboratories (Research Center, Agrochemical, Advanced Materials and PGA)  Implemented measures for 69% of avoidable risks  Informed employees of accidents at other companies and conducted in-depth study on past serious accidents	*
Quality assurance and product safety  Improvement of customer satisfaction  Reduce quality complaints and off-specification products by 15% YOY  • Reduce quality complaints and off-specification products to 13 case them • Reviewed		Not achieved 15% reduction of qualitiy complaints achieved 15% reduction of off-specification products  Conducted audits of outsourcing contractors related to 13 cases and completed corrective actions against them  Reviewed and revised specifications for products, raw materials and packaging materials	*	
Energy management	Streamlining energy use	Reduce specific energy consumption by 1% YOY	Specific energy consumption increased 6%     Transportation energy consumption volume unit decreased 5%     Implemented energy-saving equipment in manufacturing divisions     Promoted company-wide energy-saving initiatives and activities	*
Community relations	To be approved and trusted by society	Achieve harmony with local communities     Conduct risk communication	Conducted 11th CSR community dialog meeting     Held science lessons at elementary schools and engaged in other community volunteer activities     Conducted plant tours for the public	***

<sup>\*1</sup> Chemical substances that are subject to the Pollutant Release and Transfer Register (PRTR), a national environmental database of potentially hazardous chemical substances and/or pollutants released to air, water and soil and transferred off-site for treatment or disposal

\*2 Personal accident classifications: Class 1 - Serious personal injury accidents, including death, Class 2 - Personal injury accidents that result in leave from work for 4 days or longer, Class 3 - Personal injury accidents that result in leave from work for one to three days

\*3 Self-evaluation: \*Needs more effort \*\*Achieved most targets \*\*Achieved all targets

# **NEW FACE**

# Kureha Vietnam Co., Ltd.

Under the slogan of "Toward a Prosperous Vietnam", we are harnessing young strength to engage in maintenance of a safe and comfortable workplace, and improved quality.



Hitoshi Takahashi

# **K**rehalon

# Krehalon Industrie B.V.

In addition to ISO9001 and ISO14001, we are promoting utilization of the newly added ISO26000 to our CSR activities.



Henk Boersma

# Main efforts in FY2013

Kureha Vietnam started operations in 2008 with the objective of the manufacture and sales of Krehalon film and ML film bags for food packaging use.

To create a workplace where employees can say "I am so happy to be working at Kureha Vietnam", we are raising company-wide goals and action standards "toward a prosperous Vietnam". To maintain a safe and comfortable workplace environment, we implemented evacuation and disaster prevention training four times in FY2013. In addition, we have started activities aimed at reducing the risks of personal accident occurrence.

Based on ISO9001, we strive to improve the quality of products and services. In particular, we are brushing up our manufacturing technology to improve quality and boost global competitiveness.

In December, we held a workplace tour to boost amity with our employees and their families.



Risk prediction training



Exterior of the Head Office building

# Main efforts in FY2013

# 1 Management System

①In 1998, Krehalon Industrie B.V. obtained ISO9001 certification, and obtained ISO14001 certification in 2000, to implement quality improvement as well as environmental conservation activities.

# 2 ISO26000

1 In December 2013, toward the goal of dissemination and development of CSR activities we decided to participate in the project promoted by NRK (Federatie Nederlandse Rubber- en Kunststofindustrie), an association of 470 companies engaged in the manufacture and sales of synthetic rubber and plastics. The NRK project is based on ISO26000, and aims for dissemination of CSR activities, in concert with the corporation.

# 3 Environmental conservation

1) As a result of efforts to cut back on industrial waste, we achieved a recycle rate of 100% in FY2013.

②We strive to supply food packaging materials with consideration for the environment.

### 《Product Introduction》

Multilayer shrink-wrap film for automated packaging systems contributes to reduction in the volume of plastic used by customers when compared with conventional packing, and is therefore a product that contributes to sustainability.



Krehalon Industrie B.V. Head Office Plant



Krehalon FS film for cheese packaging

# company overview

Established Capital Net Sales Number of Employees Head Office Location

January 11, 2008 21.9 million US dollars 32.0 million US dollars (March 2014 period)

281 persons Plot 227/3, Road 13, Amata l.p., Long Binh Ward, Bien Hoa city, Dong Nai Province Vietnam

Business Outline

Manufacturing and sales of food packaging materials

# company overview

Number of Employees

Head Office Location

**Business Outline** 

Established

Capital

Net Sales

Website

2.722 million euros

42.741 million euros (December 2013 period) 203 persons

Londenstraat 10, 7418 EE Deventer, The Netherlands Resin processing and sales (food packaging materials) http://www.krehalon.com/

# Kureha Chemicals Shanghai Co., Ltd.

We take action standards in line with Kureha standards for quality improvement and environmental conservation, and also for promotion of enlightenment and education regarding compliance.



Shigeki Iwamoto Managing Director

# Kureha Advanced Materials LLC

We are promoting monitoring of the workplace environment and utilization of value stream maps, to create highly productive workplace that is safe and kind to the environment.



Leeland Pfeifer

# Main efforts in FY2013

# 1 Compliance

①Based on the Kureha China Group compliance standards, we regularly implement compliance awareness programs for employees.

# 2 Quality assurance

- ①Our goal is improvement of customer satisfaction, and we strive to swiftly response to all inquiries from customers.
- ②In line with ISO9001, we promote maintenance and improvement of quality management technology.

# 3 Environmental conservation

- ①In line with ISO14001, we are engaged in environmentally responsible manufacturing.
- ②To reduce the volume of energy use volume, we have established a Save Energy Committee, and started activities.

# 4 Safety and disaster prevention, and labor safety and health

Employees are constantly engaged in improving work safety individually and in groups.

### ≪Product Introduction≫

The company's main products are "Kreca FR" molded heat insulation materials made of Kureha's pitch-type carbon fiber. They are used in high-heat furnaces at temperatures ranging 1000C to 2500C to manufacture high-quality ceramics and metals, sintered sapphire for LED, magnetic materials for electric vehicles, silicon ingots for solar cells and semiconductors.



- FD

Example usage

# company overview

Established
Capital
Net Sales
Number of Employees
Head Office Location
Business Outline
Website

April 30, 2003 12.9 million US dollars 52 million yuan (December 2013 period) 74 persons No.1585 Xing Rong Road, Jiading, Shanghai, China Manufacture of carbon fiber heat resistant materials

http://www.kureha.sh/

# Main efforts in FY2013

# 1 Environmental conservation

①To protect the environment, and strive for coexistence with local society, we have made use of vegetation, soil contours, and other pre-existing properties of the site, to establish a pond with function for water purification (so-called "bio-retention"). The scenery attracts the eye of passersby during the season when flowers are in full bloom.

# 2 Labor safety and health

- ①The labor safety and health team meets each month to promote creation of a workplace that is safe and kind to the environment.
- ②To preserve the health of employees, we implement air environment measurements and noise level surveys at locations throughout the plant.
- ③To boost employee safety and productivity, and achieve rationalization of manufacturing processes and improved profits, we have completed a value stream map (an object and information flow diagram for all product processes from the raw material stage to delivery to the customer).



Noise level monitor



bio-retention

### ≪Product Introduction≫

The company's main products are heat insulation materials made of Kureha carbon fibers. They are purpose-designed for use in heat-treating furnaces to manufacture single- and multicrystalline silicon ingots and synthetic sapphire ingots for semiconductors and solar cells, and also furnaces to process metals and ceramics for various industrial applications.

# company overview

Established Capital Net Sales Number of Employees Head Office Location Business Outline Website January 1, 2007 490.2 thousand US dollars 3,132 thousand US dollars 9 persons 10 Acee Drive, Natrona Heights, PA, 15065 USA Manufacture of carbon fiber heat resistant materials

http://www.kureha.com/

# Krehalon Industrie B.V.

Certification Management System	Date acquired
Environment (ISO14001)	June 2000
Quality (ISO9001)	April 1998

ltem	Unit	2009	2010	2011	2012	2013
Energy consumption (crude oil equivalent)	kL		4,045	4,038	4,075	4,167
Energy consumption per unit of sales	kL/ 1 mil EUR		102	101	99	97
CO <sub>2</sub> emissions (carbon equivalent)	tons		1,780	1,755	2,049	1,822
Number of labor accidents	Cases	2	7	1	1	3
Number of fatal labor accidents	Cases	0	0	0	0	0
Total labor time	1000 hours	349	360	367	364	363
Labor accident frequency rate	-	5.73	19.46	2.72	2.75	8.26
Labor accident severity rate	-	0.16	0.31	0.01	0.01	0.57
Number of facility accident	Cases	4	10	4	1	6
Disposed waste volume	tons	1,566	1,758	1,822	1,987	1,797
Recycled materials volume	tons	1,255	1,732	1,703	1,949	1,797
Material recycling rate	%	80	99	93	98	100
Waste landfill volume	tons	311	26	88	38	0

# Kureha Chemicals Shanghai Co., Ltd.

Certification Management System	Date acquired
Environment (ISO14001)	January 2007
Quality (ISO9001)	January 2006

ltem	Unit	2009	2010	2011	2012	2013
Energy consumption (crude oil equivalent)	kL		1,786	2,474	1,686	1,621
Energy consumption per unit of sales	kL/ 1 mil RMB		15	13	27	31
CO <sub>2</sub> emissions (carbon equivalent)	tons		1,119	1,564	1,047	1,025
Number of labor accidents	Cases		0	0	2	0
Number of fatal labor accidents	Cases		0	0	0	0
Total labor time	1000 hours		185	189	158	158
Labor accident frequency rate	-		0.00	0.00	12.6	0.00
Labor accident severity rate	-		0.00	0.00	3.45	0.00
Number of facility accident	Cases		0	0	0	0
Disposed waste volume	tons		49	84	82	52
Recycled materials volume	tons		9	20	2	3
Material recycling rate	%		18	24	2	6
Waste landfill volume	tons		8	11	20	49

# Kureha Advanced Materials LLC

Item	Unit	2009	2010	2011	2012	2013
Energy consumption (crude oil equivalent)	kL		960	1,151	1,234	1,173
Energy consumption per unit of sales	kL/ 1 mil USD		256	405	331	374
CO <sub>2</sub> emissions (carbon equivalent)	tons		430	522	624	656
Number of labor accidents	Cases	0	4	1	0	0
Number of fatal labor accidents	Cases	0	0	0	0	0
Total labor time	1000 hours	21	30	29	24	12
Labor accident frequency rate	-	0.00	135	34.8	0.00	0.00
Labor accident severity rate	-	0.00	0.13	0.10	0.00	0.00
Number of facility accident	Cases	0	0	0	0	0
Disposed waste volume	tons	0	0	0	0	0

# Kureha Vietnam Co., Ltd.

ĺ	Certification Management System	Date acquired
	Quality (ISO9001)	March 2010

Item	Unit	2009	2010	2011	2012	2013
Energy consumption (crude oil equivalent)	kL					3,122
Energy consumption per unit of sales	kL/ 1 mil USD					98
CO <sub>2</sub> emissions (carbon equivalent)	tons					1,382
Number of labor accidents	Cases					4
Number of fatal labor accidents	Cases					0
Total labor time	1000 hours					585
Labor accident frequency rate	-					6.84
Labor accident severity rate	-					0.02
Number of facility accident	Cases					0
Disposed waste volume	tons					1,114
Recycled materials volume	tons					214
Material recycling rate	%					19
Waste landfill volume	tons					900













For inquiries about the Kureha CSR Report:

# **KUREHA CORPORATION**

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