About the Front Covers

A childlike curiosity is fundamental to realizing Kaneka's long-term vision of building a more impressive and productive future. The three colored balls indicate that we are always there for the young, and graphically complement the special features in this report.

Why CSR?

corporate social responsibility

kaneka

http://www.kaneka.co.jp/kaneka-e/

Osaka Head Office
2-3-18, Nakanoshima, Kita-ku, Osaka 530-8288, Japan
Tel: +81-6-6226-5050 Fax: +81-6-6226-5037

Tokyo Head Office
1-12-32, Akasaka, Minato-ku, Tokyo 107-6025, Japan
Tel: +81-3-5574-8000 Fax: +81-3-5574-8121

MIX
Paper from responsible sources
FSC® C004858

VEGETABLE OIL INK

This printed matter is using FSC® certified paper includes sources from responsibly managed forests.
The environment-friendly vegetable oil ink is used for printing.

CSR Communication Book 2014

corporate social responsibility

kaneka

Overcoming Existing Boundaries to Build Kaneka's the Trust for People and Technology

We will Continue Seeking to through Science

Reputation through

Make Wishes Come True

“Go beyond the border !”

Environmental Awareness is a Key Management Priority

I was appointed president on April 1, 2014 to lead the Kaneka Group. The world is changing rapidly, making it even more important for management to identify and tackle such transformations.

From a global perspective, as the world population continues to increase, we are faced by aging societies in developed nations to a degree never before experienced in human history. We therefore need to shift our focus from petrochemicals to the pursuit of social sustainability. The aging of society has raised many issues relating to medicine and nursing care. Other developments include the extraction and use of shale gas and oil within the United States, which has replaced its traditional oil-dependent industrial structure with a new framework. Then there are the technological integrations that are driving advances in automotive informatics and smart houses.

Such swift and dramatic technological changes are paradigm shifts. An entity like Kaneka that seeks to develop innovative technologies that resolve the challenges of social developments must refine its development capabilities so it can continue creating products that are high-tech and valuable.

We are determined to pursue R&D that embraces the opportunities resulting from such changes.

Launching a New Medium-term Plan

On April 1, 2014 we embarked on a three-year management plan that underpins the Declaration of Kaneka United, which we deployed in 2009 as part of our long-term management vision for 2020.

To date, we have undertaken various efforts in the spirit of change and growth and have evolved as an industry pioneer. Under the new plan, we seek to accelerate our evolution and institute bolder reforms. We will overcome existing boundaries to capitalize on exciting new opportunities, drawing on the following five key drivers for growth.

- Exceed customer expectations by fashioning unique, market-leading products
- Expand our business to go beyond intermediate materials manufacturing
- Increase the scale of our own and other companies, divisions, and organization through mergers and acquisitions, alliances, and other initiatives
- Broaden markets by operating globally
- Transform and accelerate R&D to pursue sustainable growth

We will step up expansion beyond existing frameworks by collaborating in a range of diverse fields.

By succeeding, we will build a trusted reputation among all stakeholders for bringing people and technology together and optimize the value of our commitment to leveraging science to make wishes come true.

Safety above All

Safety is the foundation of manufacturing and competitiveness. In the past few years, we have reiterated that safety is our top priority. However, despite our goal of eliminating all accidents at Kaneka, the number actually increased in fiscal 2013. Although none of the accidents were grave, we viewed them as a bad omen. Management is greatly concerned and determined to do whatever it takes to prevent further mishaps.

We know that there are no shortcuts and that we must remain true to our basic safety principles. We will reinvigorate the risk awareness of employees involved in manufacturing and reconfirm our equipment safety measures.

Kaneka Group will continue striving to overcome boundaries in keeping with its “Go beyond the border slogan,” leveraging diverse tools to improve communication with stakeholders. As always, we appreciate your candid feedback on our activities.

M. Kadokura

Mamoru Kadokura
President
Kaneka Corporation

Why do you need to engage in CSR?

Why do you publish the CSR Report? What can we gain by reading it?

Why CSR?

For the Kaneka Group to become a truly CSR-driven entity, all employees must ask themselves what they can do for society, and act accordingly based on the knowledge that both the Company and its employees are members of society.
Five years have passed since the Kaneka Group renamed the Responsible Care Report the CSR Report. In 2013, we renamed the digest version of the CSR Report the Communication Book and stepped up dialogue with our stakeholders.
Stakeholders responded to questions about what they expect from Kaneka Group and how well we are doing in that regard.
In fiscal 2013, we continued groupwide initiatives to meet stakeholder expectations.
This report seeks to enhance stakeholder engagement and present the Group's CSR activities through its core businesses. We look forward to your feedback.
Through its CSR activities, the Kaneka Group will continue generating new value for society by communicating closely with employees.

Why is CSR necessary in addition to donations, volunteer work, and other social contribution activities?

Why do employees also need to engage in CSR?

To operate globally, we have to look beyond our own interests and consider the overall needs of society.

Corporate Social Responsibility

Many stakeholders use CSR reports to reconfirm corporate value. This is because they can measure the business strengths, benefits, and problem-solving initiatives describe in the reports.

CSR goes beyond social contributions. The satisfaction of our customers and other stakeholders resulting from our business drives sustainable corporate growth.

Organizational efforts alone are not enough to improve the corporate brand, because stakeholders judge the actions of individual employees. Employees must always keep this in mind.

From the next page, we showcase the Kaneka Group's CSR in the special features and highlights sections, as well as the positioning of CSR in the Kaneka Group and its businesses.

See the PDF version of this report for more details. Kaneka CSR Search

Kaneka Group CSR Communication Book 2014
CONTENTS

The Kaneka Group's Corporate Philosophy and CSR Positioning

In keeping with the Declaration of Kaneka United, the Kaneka Group's Basic CSR Policy forms the foundation of employee action to realize our Corporate Philosophy.
Based on this policy, the key stakeholders in the Group's CSR activities are employees, society, customers, the environment, shareholders and investors, and vendors.
We endeavor to improve enterprise value to enhance stakeholder satisfaction through business activities.

■ Management Philosophy Structure "Declaration of Kaneka United"

Expresses our raison d'être and our social mission

① **Corporate Philosophy**

With people and technology growing together into creative fusion, we will break fresh ground for the future and tie in to explore New Values.
We are also committed to challenge the environmental issues of our planet and contribute to upgrade the quality of life.

Describes our key values

② **Corporate Ideals**

Toward an Even More Impressive and Productive Future

Hold in your hands the future you have always dreamed of.
We are a highly perceptive and collaborative value-creating group or, as we like to say, a "Dreamology Company. (see note)"

Note: "Dreamology" is an expression coined from 'dream' and 'logy' (science).
Our "Dreamology Company" is a "highly perceptive and collaborative value-creating group."

Provides an action agenda for each employee for materialization of our Corporate Philosophy

③ **Basic CSR Policy**

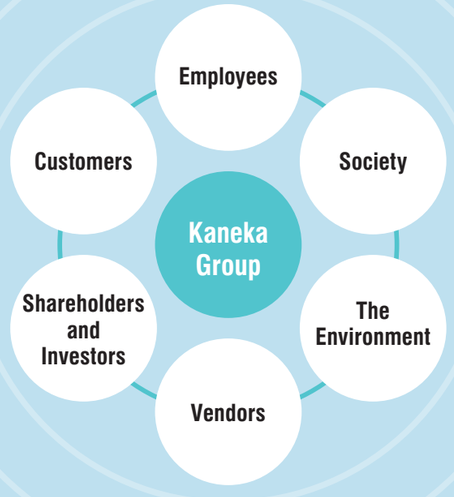
Basic CSR Policy

The Kaneka Group will fulfill our corporate social responsibility through the materialization of our corporate philosophy with the earnest and forward-looking efforts of each employee.

1. We will strive to fully understand the cultural backgrounds, manners and customs of the countries and regions where we do business as a means of actively contributing to local societies and communities.
2. We will abide by all relevant laws and regulations and, in undertaking our business activities, conduct ourselves in a fair manner based on free competition.
3. We will place high priority on communicating with all our stockholders and stakeholders, and will disclose all pertinent information.
4. We will respect the personalities and individuality of all our employees to support and encourage the development and utilization of their abilities.
5. We will uphold safety as the top-priority concern of management as we dedicate our best efforts to securing a sound and safe workplace environment, offering safe products, and working to protect the global environment.

Kaneka Group's CSR Activities Group CSR activities aim to increase stakeholder satisfaction through business activities, thereby boosting enterprise value.

■ Kaneka Group's Stakeholders



Customers
Our customers are the people who purchase Kaneka Group products.
We provide them with quality products and services, ensure product safety, and disclose information.

Shareholders and Investors
They recognize the value of our corporate brand and own our shares.
We offer appropriate returns and disclose timely information so we can increase overall trust in the Group.

Employees
Our employees include the people who work for the Kaneka Group, as well as their families.
We offer employees appropriate treatment, remuneration, self-fulfillment, and safe working environments.

Society
Including citizens and consumers.
We can increase enterprise value by fulfilling our social responsibilities.
We consider such factors as plant operational safety from the perspectives of social contributions, welfare, and community engagement.

The Environment
By this we mean the global environment.
We fulfill our social responsibilities by considering the environment in our business activities, including raw materials procurement, manufacturing, and transportation.

Vendors
Raw materials suppliers and contractors.
We build mutually beneficial relationships with vendors, ensuring that transactions are fair and that we offer equal opportunities to do business.

Kaneka Business Operations

Leveraging Our Science to Contribute to the World—

Creating a Sustainable Future through Our Operations

As a comprehensive chemicals producer, the Kaneka Group manufactures chemicals, functional plastics, plastic foam products, food products, medical supplies and devices, electronic materials, photovoltaic modules, and synthetic fibers. Our technologies and products enrich people's lives the world over, contributing to a sustainable future.
Kaneka will continue leveraging its science to make wishes come true.

■ Important Strategic Domains

We face numerous global social challenges.
These include reducing environmental impact, addressing food shortages, and maintaining health care.
The Kaneka Group will continue to fulfill its responsibilities as a comprehensive chemicals manufacturer with worldwide operations by concentrating its resources on the strategic domains of the Environment and Energy, Information and Communications, Health Care, and Food Production Support.

■ Corporate Profile

Name	Kaneka Corporation
Head Office	Osaka Head Office 2-3-18, Nakanoshima, Kita-ku, Osaka 530-8288, Japan Tel: +81-6-6226-5050 Fax: +81-6-6226-5037 Tokyo Head Office 1-12-32, Akasaka, Minato-ku, Tokyo 107-6025, Japan Tel: +81-3-5574-8000 Fax: +81-3-5574-8121
Date of Establishment	September 1, 1949
Paid-in Capital	33,046 million yen (as of March 31, 2014)
Number of Employees	Consolidated 8,907
Domestic Facilities	Sales Office Nagoya Plants Takasago (Hyogo Prefecture) Osaka (Osaka Prefecture) Shiga (Shiga Prefecture) Kashima (Ibaraki Prefecture)
Research Institutes	Frontier Materials Development Laboratories Medical Device Development Laboratories Biotechnology Development Laboratories Photovoltaic & Thin Film Device Research Laboratories Molding & Processing Development Center Thin-Film Process Technology Development Center Process Technology Laboratories
Overseas Facilities	U.S.A., Belgium, Singapore, Malaysia, China, India, Taiwan, Korea, Australia, and others
Kaneka Group	92 subsidiaries (including 34 domestic and 26 overseas consolidated subsidiaries)

Weather-resistant methyl methacrylate film improves long-term durability of exterior materials

Extruded polystyrene foam board for housing insulation

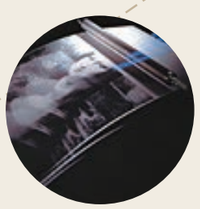
Toughness-enhancing master batch for epoxy resin contributes to more robust, lighter automobiles and airplane

The programmable closed circuit cell culture system is used in the research of regenerative medicine and cell therapies

Environment and Energy

We produce innovative materials that reduce environmental impact by mitigating society's carbon footprint while creating products and markets that can help resolve environmental problems around the world

Form meets function:
Roof-integrated photovoltaic modules

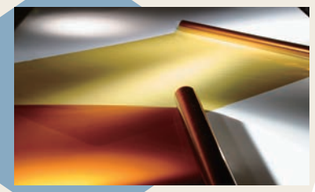


Bonded magnets for laser printers and copiers

Health Care

We create materials and products that contribute to health, medical treatment, and nursing care

Reduced form coenzyme Q10 (Ubiquinol) that contributes to a healthy lifestyle



Ultra-heat-resistant polyimide film used for heat-resistant insulation in mobile devices

Information and Communications

We provide high-performance materials that underpin the information society

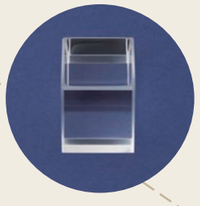
Optical transparent film for liquid crystal display substrates

A blood purification system that selectively removes pathogenic agents from blood

100%-plant derived biopolymer naturally degrades into carbon dioxide gas and water

Food Production Support

We aim to resolve food issues by providing materials that support livestock farming and aquaculture



Heat-resistant and light-resistant transparent resin for advanced optical devices

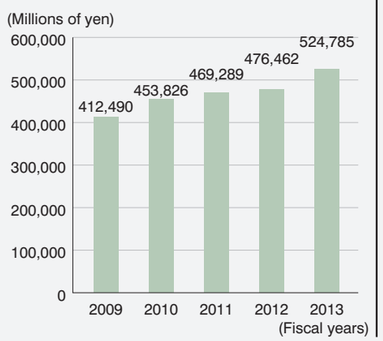
Catheters for intravascular treatment

Multifunctional yeast for all methods of baking

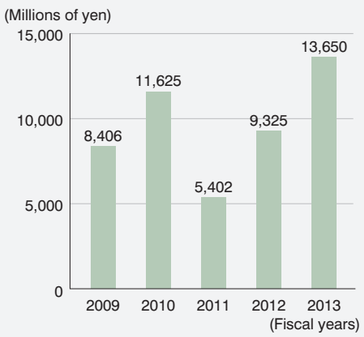
Anti-freeze protein to maintain the quality of frozen foods

Polystyrene foam made with bead method for fish or vegetable containers

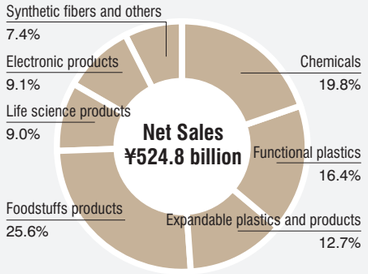
■ Net Sales (Consolidated)



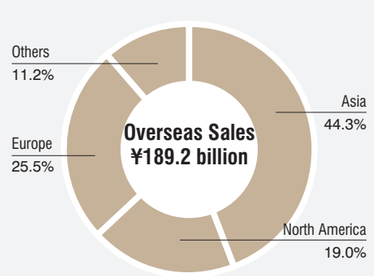
■ Net Income (Consolidated)



■ Consolidated Sales by Business Segment (Fiscal 2013)



■ Consolidated Overseas Sales by Area (Fiscal 2013)



Providing Thermal Solutions that Enhance the Compactness and Performance of Mobile Devices

Smartphones and other mobile devices have transformed our work and lifestyles, and wearables in the form of glasses or wristbands are just around the corner. More compact and powerful information devices demand thermal solutions, which has prompted Kaneka to explore the high thermal conductivity of graphite. We have pioneered solutions by collaborating with a university that is working on thermal control for satellites.

Kaneka Graphite Sheet helps dissipate heat from mobile devices

Customer

POLICY & VISION

The Kaneka Group leverages science to help create more comfortable and convenient societies. We go beyond providing highly functional materials to identify customer needs and offer innovative optimal solutions.

Social Needs and Kaneka's Plan

Heat control is vital for mobile devices

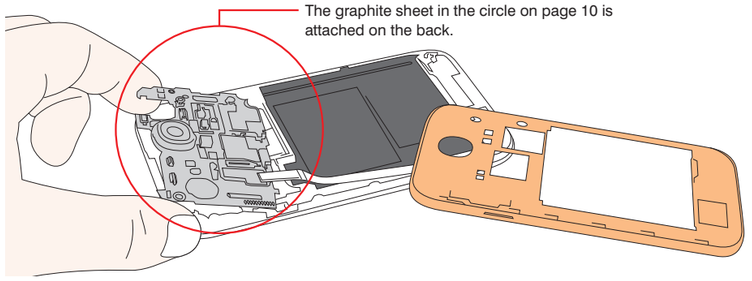
There are two key IC-related heat issues with smartphones and tablet PCs. One is the need to avoid low-temperature burns when the skin touches the surface of a device. The other concerns the heat that the IC generates, which degrades the chip and device performance.

Satoshi Matakawa, who was a Team Leader of Marketing Group III in the Electrical & Electronic Materials Division (at the time when we produced this report), told us that, "TVs and PCs use aluminum or copper foil, while laptop PCs and other equipment incorporate cooling fans. However the metal foil is too heavy and the thickness is a problem for thin and lightweight devices such as smartphones and tablet PCs. Accordingly, Kaneka offers graphite sheet as a thermal solution for mobile devices. The sheet is far more thermally conductive than other materials. In fact it's three times more thermally conductive than copper foil. To put it another way, the sheet only needs to be one-third the thickness of copper foil to exhibit the same capabilities. It is well suited to applications where lightness is important."

Kaneka Group's Approach

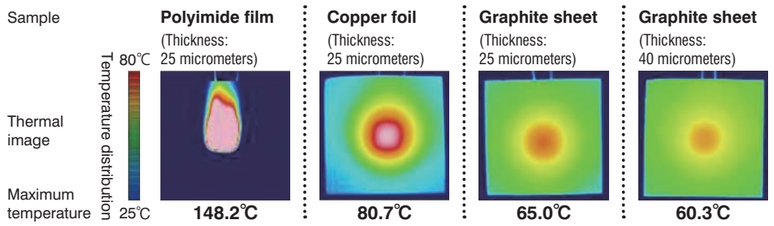
Launching the thermal solutions materials business in 2007 after projecting that mobile device heat would pose an issue

Graphite's many properties include its electrical conductivity, gas-permeability and high thermal conductivity, so this material offers business potential in numerous fields. We began researching graphite in 2003. As Toshinori Mizuguchi, Manager of Marketing Group III in the Electrical & Electronic Materials Division, commented, "We realized in around 2006 that there would be a need for thermal solutions, which was when the heat of ICs became an issue in mobile phones that were becoming increasingly smaller and more powerful. Metallic or natural graphite was mainly used as the thermal solution material. However we believed that thin, highly heat-conductive graphite sheets would be able to resolve the issue. Today, most smartphones use these sheets."



■ Comparing diffusion conductivity of graphite sheets

A greater thermal diffusion than other materials. Performance changes according to thickness



* Measurements are not guaranteed.

Becoming a thermal solutions company by leveraging close customer ties to cultivate the market

Mr. Matakawa says, "Kaneka is mainly in the business of selling materials, but we decided to market our graphite sheet directly to manufacturers of smartphones and other devices. This was because we wanted to get in ahead of rivals at ground level to establish new businesses by talking directly with customers. Our aim was to become a provider of all sorts of thermal solution materials, not just graphite sheet."

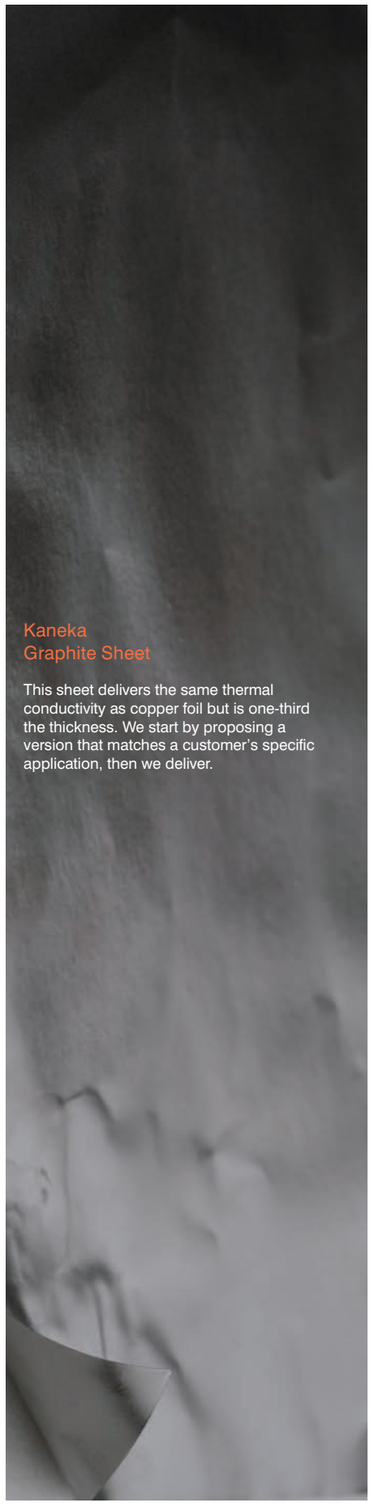
He adds, "Initially, no sales resulted from any of our business proposals. Smartphone producers preferred not to use thermal solution materials, and some tended to think that using such materials represented a failure in design engineering."

"I had to report back the lack of demand for graphite sheet. But my boss at the time told me not to return to the office until I'd made my first sale, so I did what I had to do, standing around every day in the cafeteria of one of our customer's companies."

Toshinori Mizuguchi
Manager,
Marketing Group III,
Electrical & Electronic Materials Division

Satoshi Matakawa
Team Leader of GS Materials Sales Team,
Marketing Group III,
Electrical & Electronic Materials Division
(at the time)

Providing Thermal Solutions that Enhance the Compactness and Performance of Mobile Devices

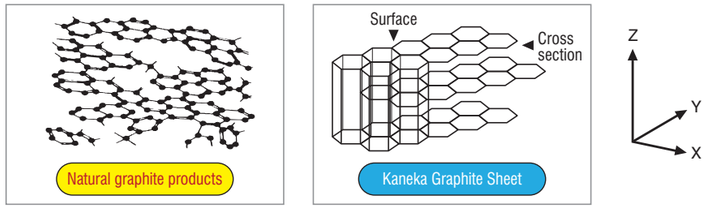


Kaneka Graphite Sheet

This sheet delivers the same thermal conductivity as copper foil but is one-third the thickness. We start by proposing a version that matches a customer's specific application, then we deliver.

■ Basic properties of Kaneka Graphite Sheet

Compared with the random structure of natural graphite products, Kaneka Graphite Sheet features a crystalline layer.



Kaneka Graphite Sheet has superior characteristics compared to natural graphite as follows.

1. High thermal conductivity 2. Flexibility 3. Low water absorption 4. High purity

		Natural graphite products	Kaneka Graphite Sheet
Thickness (micrometers)		40~250	25 or 40
Thermal conductivity (W/m·K)	Direction of XY plane	200~300	1500
	Direction of Z axis	5~10	5

Anisotropic thermal conduction

Thick but with high thermal conductivity

* Measurements are not guaranteed.

Mr. Matakawa recalls that, "Design engineers had a lot on their hands, and it was virtually impossible to make appointments with them. But I realized that they would have to eat lunch no matter how busy they were, so I stood firm in the cafeteria until finally I got noticed. We started selling our products around October 2008."

"The key to this business is maintaining close relationships with customers. You never know when an opportunity will come up. It's important to be ready to serve a customer by promptly providing a sample or proposing a solution."

Mr. Mizuguchi notes that, "The electronics industry changes rapidly, so trial and error remains the order of the day. Our value comes from the fact that we built an organization that is keen to pursue new challenges. We collaborate with manufacturing (Tochigi Kaneka Corporation), research (Electronic Materials R & D Group) and marketing. We wouldn't be here today without the assistance of the people in the division who constantly supported us when we were unable to make a sale."

Mr. Matakawa says that, "Kaneka's advantages are its organizational strengths and its production of polyimide film, which is a raw material in graphite film. We have the capabilities to manufacture graphite film in 18, 25, and 40 microns and other thicknesses to satisfy customer needs. We draw on thermal simulation in our technical services so we can propose minimal sizes to customers to meet their performance requirements, thereby lowering their costs. Our customers are very happy with our services."

We exchange opinions as part of our endeavors to offer products that customers need most

Building prototyping and production systems alongside customers to accelerate responses and stabilize supplies

The production of smartphones and other mobile devices is shifting from China to Southeast Asia. Kaneka has responded to this trend by optimally locating its prototyping and production sites.

Mr. Matakawa says that, "Responsiveness is one of Kaneka's strengths, and it is the result of dealings with our customers that have toughened us up. For example, a Korean customer demanded a very short delivery lead-time, requiring marketing personnel to often catch overnight flights from Japan to hand-deliver items from Tochigi Kaneka corporation. Today, we have a prototype manufacturing facility in Korea to accelerate delivery to customer development sites."

Mr. Mizuguchi says that, "We originally manufactured graphite and processed stickers in Japan. However we began production in Malaysia in January 2014. Having two manufacturing locations enhances supply stability."

Prospects

Aiming to become the "go-to" thermal solutions provider

Thermal solution materials have come a long way since 2007, and they are now more commonplace in advanced information devices. Furthermore, companies are now seeking even more advanced thermal solutions.

Mr. Matakawa notes that, "Using graphite sheet does not completely resolve IC heat issues because there is a layer of air between the chips and the sheet. We are working with Frontier Materials Development Laboratories and New Business Development to jointly develop high-value-added solutions that combine graphite sheet and thermally conductive RTV elastomer (see note 1). This would eliminate the space between the uneven surfaces of ICs and the graphite sheet, and directly absorb heat from the chips."

Mr. Mizuguchi says, "Smartphone manufacturers are launching new models every three months or so. By talking with customers, we can learn what types of model they plan to deploy, assisting us to formulate proposals for new materials. We will boost our capabilities so Kaneka becomes the "go-to" provider of thermal solutions."

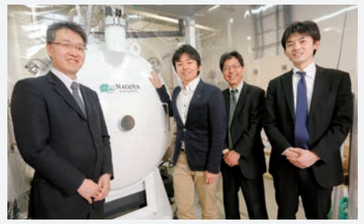
Note 1: RTV (Room Temperature Vulcanization). Thermal conductive RTV elastomer is a non-silicone vulcanizing elastomer that is thermally conductive at room temperatures.

Message ▶ Stakeholder Message

Heat is a common challenge for both satellites and smartphones. It is vital to provide the latest technology at reasonable prices

Hosei Nagano
Associate Professor,
Department of Aerospace Engineering,
Nagoya University

My research focuses on thermal control for satellites. There is no air in space, so as you cannot release heat with convection you have to control it with conduction and radiation. In space, a lot of equipment is confined in a small space, so you have to control heat without using electricity. In this sense the challenge is the same for satellites and smartphones. Kaneka tripled the performance of graphite sheet from the initial version, attaining up to 10-fold the heat conductivity of aluminum alloy. There are two key considerations from the perspective of aerospace industry development. One is to supply the latest technology at reasonable prices. The second is to resolve the various heat issues, not just provide materials.



From left: Yasushi Nishikawa, Associate Professor Hosei Nagano, Toshinori Mizuguchi, and Kazuki Tsutsui of the Technology Management Department in the Electrical & Electronic Materials Division

■ History of the graphite sheet business

2003	Started basic research into graphite
2006	Started market commercialization
2007	Secured benchmark facilities (Frontier Materials Development Laboratories of Osaka Plant), proposed business launch (August)
2008	Obtained first machine and initial work and launched new business
2014	Began production in Malaysia

▶ Response to Message

We will leverage feedback from the extremes of space to develop thermal solutions technology

Yasushi Nishikawa
Electronic Materials R&D Group,
Electrical & Electronic Materials Division

I first met Associate Professor Nagano at the Japan Aerospace Exploration Agency in 2004. It was the year after Kaneka started researching graphite sheet. Our collaboration blossomed in areas such as measuring and assessing the thermo physical properties of graphite sheet and identifying issues. We have a certain confidence in process engineering as a chemicals manufacturer. Still, obtaining feedback on the use of this sheet in extreme environments like satellites is very useful for business development. We will continue to develop thermal solution technology by drawing on valuable ideas from satellites.

Protecting the Environment by Creating Advanced Manufacturing Sites

The Kaneka Group has devoted considerable effort to building advanced plants that deliver high quality at low prices. In 2008, we started an energy-saving project at our four parent plants in Japan, reducing energy consumption by 8% in 2013. We deployed material flow cost accounting (MFCA) in 2013, and are pursuing manufacturing that lowers environmental impact through training and technological innovations.

The Takasago Plant conducts energy-saving presentations every year attended by plant personnel and representatives of Group companies to promote energy-saving efforts throughout the organization

Environmental POLICY & VISION

The Kaneka Group utilizes science to develop and popularize materials and products to assist in resolving environmental issues. We pursue sustainable manufacturing by creating plants that consume energy and other resources efficiently.

Social Needs and Kaneka's Plan

Aiming to lower environmental impact through participation by all and harnessing diverse insights

Adverse circumstances for the energy usage of domestic production sites resulted after nuclear power plants went offline after the Great East Japan Earthquake and because of high natural gas prices. Because we consume so much energy as a manufacturer, we have deployed numerous measures to secure diverse insights from contributors throughout our organization. The idea is to create quality products at low prices by consuming less energy and other resources.

Kaneka Group's Approach

Our energy saving project generated 15,900 energy-saving ideas and enabled us to consume 8% less energy

In 2008, Kaneka launched an energy-saving project at the Takasago Plant, extending this initiative to its Osaka, Shiga, and Kashima plants. We endeavored to cut costs as well as conserve energy, strengthen our manufacturing capabilities and lower environmental impact.

Naoki Furukawa, then a General Manager of the Corporate Technology Administaration Department (and a Director of the Process Technology Laboratories since April 2014), told us that, "We deployed systemic and investment measures to ensure the project's success. To identify energy-saving topics from new perspectives, we created a team of facilities experts, including those in energy facilities and process technology, in addition to manufacturing experts. We also secured help from an external consultant."

Mr. Furukawa says that, "The consultant estimated that we could still save 10% more energy. We had already undertaken energy-saving initiatives and were certain that such a cut was impossible. To our surprise, we obtained 15,900 new ideas, as everyone participated in the initiative, optimizing energy sharing between plants and equating to a 10% reduction in consumption. We set aside 200 million yen annually to implement energy-saving ideas, the point being to make funds available for measures whose initial investments needed time to be recouped. As a result, we lowered energy consumption by 8% and improved energy spending."

Mr. Furukawa notes that, "We have also made advances with training. As soon as the project started moving forward, energy-saving specialists emerged in-house as the driving force behind each project to provide support and implement measures and technologies. Adding energy-saving concepts to conventional small group activities made the effort more satisfying and motivating for project members. Manufacturing and engineering personnel make energy-saving presentations and share know-how with other plants through factory visits."

Although it completed its energy-saving project in 2013, Japan's energy situation suggests a need to accelerate initiatives, which is why Kaneka is undertaking MFCA.

Building on enhanced capabilities through energy-saving projects by leveraging MFCA to reduce environment impact and plant costs

Following the energy-saving project, the Takasago Plant rolled out MFCA at three model worksites from 2013 to lower the environmental impact of manufacturing.

MFCA initiatives encompass not only raw material losses but also factor in by-products and fixed system costs, waste heat and other loss costs that have been traditionally deemed acceptable production losses. MFCA optimizes overall production by revealing losses from new perspectives and encouraging the efficient use of resources and energy.

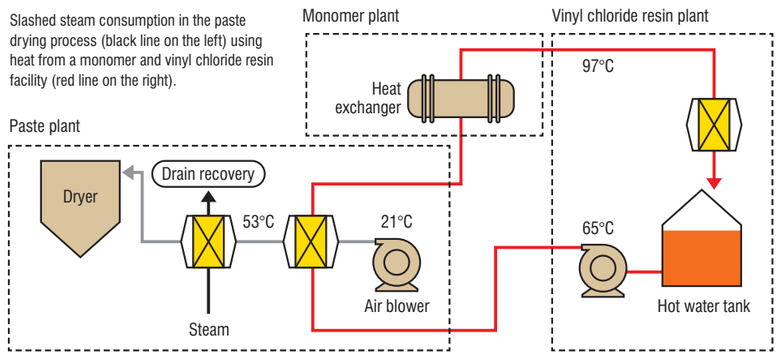
Energy-saving initiatives that have contributed to overall plant optimization

• Saving energy by using exhaust heat from other plants (Takasago Plant)

We consistently reduced the consumption of steam, making it challenging to implement further cuts at a paste plant making vinyl chloride paste resin. The focus therefore turned to waste heat from other plants. By using heat generated by an adjacent monomer plant and vinyl chloride resin facility, the paste plant slashed the amount of steam needed for the paste drying process, which consumes the greatest amount of steam.

■ **Heat recovery flow at a vinyl chloride paste plant**

Slashed steam consumption in the paste drying process (black line on the left) using heat from a monomer and vinyl chloride resin facility (red line on the right).



• Using waste heat from a production facility to conserve energy (Shiga Plant)

The Shiga Plant focused on the issue of waste heat from the deodorizing furnace of an ultra-heat-resistant polyimide film production facility, and promoted its use as a source of steam within the plant. In 2012, we built a waste heat recovery boiler to reduce the ratio of untapped waste heat from 53% to 15%.

Deodorizing furnace waste heat recovery steam boiler

Protecting the Environment by Creating Advanced Manufacturing Sites

Naoki Furukawa
General Manager of the Corporate Technology Administaration Department, Production Technology Division (Director of Process Technology Laboratories since April 2014)

Hajime Iida
Administaration Team Leader, Administration management Group, Takasago Plant

Hajime Iida, Administration Team Leader for the Administration Management Group at the Takasago Plant, says that, "MFCA has traditionally been used at processing and assembly firms where it is easy to identify losses. It has been deemed harder for chemical manufacturers to deploy MFCA. By securing the collective expertise of people in manufacturing, research, and other areas, Kaneka pursued efficient resource use and production cost cuts in terms of "controlling production losses and wastes," "reducing energy and other manufacturing costs," and "building innovative processes to optimize operations."

Yasuhiko Saeki, formerly of the Production & Process Innovation Team, Administration management Group at the Takasago Plant (and at Kanekalon Division since April 2014) says that, "At model workplaces we produced material flows, cultivated ideas, and formulated improvements. As a result, we were able to identify ideas for cutting costs by more than the target of 10%, and are steadily making progress with improvements. People at the model worksites have informed us that collaboration and a change in perspective has enabled clarification of targets and issues. They have also stated that they can now engage in logical discussions and master principles, and that they have started to see the point of process improvements by breaking processes up and analyzing them with data. By augmenting the participation of everyone, the deployment of MFCA has changed the attitude of manufacturing workers."

Prospects

Lowering environmental impact and generating economic results and contributing to the benefit manufacturing has on customers and the environment

Hiroshi Yuzawa of the Business Process Innovation Division (Planning & Coordination) says that, "MFCA is a waste reduction activity that visualizes manufacturing processes and benefits both customers and the environment. We now focus on waste, which is difficult to reduce in conventional manufacturing. We improved awareness of waste by creating materials flows from new perspectives. This change in awareness has encouraged people to come up with and materialize process improvement ideas."

Yasuhiko Saeki
Production & Process Innovation Team, Administration management Group, Takasago Plant (Kanekalon Division since April 2014)

Hiroshi Yuzawa
Business Process Innovation Division (Planning & Coordination)

Mr. Yuzawa says that, "The strength of Kaneka's manufacturing sites is that they enhance the motivation of everyone in production to constantly pursue new initiatives."

He also commented that, "We will expand MFCA to other plants and group companies based on what we've achieved at the Takasago Plant. We have lowered the environmental impact and enhanced business performance by improving the 3Rs (reduce, reuse, and recycle) of discharged water and waste as tools in MFCA activities, thereby contributing to manufacturing that is beneficial for customers and the environment."

Maintaining manufacturing in Japan by improving the efficiency of existing coal boilers while constructing a natural gas cogeneration plant

Toshihiko Hayashi
Energy Department Director, Takasago Plant (at the time)

Looking to secure stable power supplies through an energy mix comprising power utilities, natural gas, and coal

At the Takasago Plant, we plan to bring on line a 30-megawatt gas turbine cogeneration system in December 2014. This setup is very efficient and can quickly shut off and flexibly supply electric power and steam because it uses what is basically an aircraft turbine. In addition, we will upgrade the existing 60-megawatt turbine coal boiler to improve generating efficiency. Our energy mix will thus comprise natural gas and coal and electricity from power utilities. This setup will underpin manufacturing in Japan by covering various risks, including those associated with summer power peaks and price hikes for natural gas, not to mention lowering specific energy consumption.

Comments from key people at model workplaces

Personnel overseeing deployment of MFCA at three model sites (from left): Tomohiro Asakura, Specialty Plastics Manufacturing Department, Hiroomi Tokimoto, Chemical Manufacturing Department (at the time), and Masaru Wakuda, Pharmaceutical Manufacturing Department (at the time)

• Ideas emerge once you understand that everything apart from the product is waste

Tomohiro Asakura
Technical, Specialty Plastics Manufacturing Department, Takasago Plant

Our department's offerings include impact modifiers for PVC used in the packaging of pills. We illustrated material flows that form the base of MFCA and visualized losses. It took some time until the idea sank in that everything apart from the product is waste. Once we understood this, ideas began to emerge from one site after another. Ideas from the research department helped us to understand how to improve costs and protect the environment in the very foundations of manufacturing.

• Deploying MFCA clarified the focuses of manufacturing process upgrades

Hiroomi Tokimoto
Technical, Chemical Manufacturing Department, Takasago Plant (at the time)

Our department makes vinyl chloride monomer for polyvinyl chloride. Presently we are upgrading aged facilities and have used MFCA to identify issues. We discovered that we were spending more on fuel in by-product processes such as recovery and purification instead of on actual manufacturing processes. MFCA highlighted the need to deploy facilities that control by-products rather than just focusing on making by-product processing more efficient.

• Vital to carefully prepare materials flows based on worksite data

Masaru Wakuda
Technical, Pharmaceutical Manufacturing Department, Takasago Plant (at the time)

Our department makes coenzyme Q10 and other products. Because we deal with microorganisms, it was hard for us to create a materials flow that balances inputs and outputs. So, we collected data from the worksites of individual operators in the areas of research, technology, and manufacturing and reflected that data in the materials flows. We were able to measure waste volumes and processing costs, promoting more improvement ideas from operators and related departments. MFCA enabled us to use worksite data to improve manufacturing.

Message ▶ Stakeholder Message

Kaneka has taken a mature approach, making a significant difference in society through its commitment to saving energy

Keiko Fujioka
President of Functional Fluids Ltd. and an editorial and executive committee member of the Japan Society of Energy and Resources

Functional Fluids Ltd. started out by efficiently manufacturing plastic mold products to conserve energy, and is involved in the research of chemical heat pumps. We have ties with Kaneka through the Society of Chemical Engineers, Japan. I visited Kaneka factories and noted its very mature approach to thermal applications.

Any rational consideration of manufacturing processes leads to saving energy. Although Japan is a leader in energy conservation, we still waste about 70% of our primary energy. I think that communicating corporate initiatives can make a difference to how society views saving energy.

▶ Response to Message

Enhancing precision in all processes and lowering the environmental impact of manufacturing

Naoki Furukawa
General Manager of the Corporate Technology Administaration Department, Production Technology Division (Director of Process Technology Laboratories since April 2014)

Kaneka conducts manufacturing on a global scale. One of its mother facilities is the Takasago Plant, which comprises a complex that utilizes its own energy supplies to produce chemicals, synthetic resins and fibers, foodstuffs, and pharmaceutical products. We aim to create an internationally competitive production base by reinforcing collaboration between departments while increasing precision in all processes at the Takasago Plant. One of the plant's strengths is that it undertakes initiatives to conserve energy and resources while measuring the outcomes of such efforts. We will continue to engage in environmentally friendly production by creating advanced manufacturing sites.

Contributing to Malaysia's Growth by Cultivating Our Manufacturing Prowess and Human Resources

In 2012, the Kaneka Group established Kaneka Asia Co., Ltd., in Shanghai as a hub to oversee Asia. At Kaneka Malaysia, our biggest production base in Asia, we contribute to community progress by cultivating manufacturing and human resources.

Undertaking initiatives to share corporate values and the Five S's of workplace organization (Sort, Set in order, Shine, Standardize, and Sustain), and posting safety reminders around workplaces

Community
POLICY & VISION

A key Group CSR policy guides our globalization, stating that, "We will strive to fully understand the cultural backgrounds, manners and customs of the countries and regions where we do business as a means of actively contributing to local societies and communities."

Social Needs and Kaneka's Plan

Employing an Asian manufacturing approach to maximize local customer satisfaction

Asia accounts for more than half of the world's population. Economic growth is encouraging the region's four billion people to seek new products and services.

Kaneka has operations in eight Asian countries. In 2012, we established Kaneka Asia in Shanghai to oversee these businesses. That company formulates strategies with regional operations and supports local corporations.

Minetoshi Marufuji, president of Kaneka Asia, says that, "As Asian living standards rising with economic growth, we believe that Kaneka can contribute much to better living. For example, the Chinese are becoming more health conscious as the population ages. Its people are also more interested in the environment these days because of the air pollution. I am sure that people will consider Kaneka's health or environmental offerings beneficial."

Kaneka is cultivating an Asian manufacturing ethos that emphasizes local production and consumption. We collaborate with regional employees to create products that match desired quality standards based on local needs and feedback, underpinned with attentive support.

Mr. Marufuji says that, "We need much more than information from Japan to cater for local needs, which is why it is vital to rely on people on the ground. We accordingly reviewed our personnel system, emphasizing skills training. We look for Kaneka Malaysia (currently a group of 5 companies) to build our regional presence. We will undertake initiatives around Asia to create a new type of manufacturing approach that draws on Kaneka's unique technologies."

Kaneka Group's Approach

Creating plants that accommodate vibrant Asian demand

Kaneka Malaysia was established in 1995 in an industrial area of the State of Pahang on Malaysia's east coast. This subsidiary manufactures everything from plastics to electronic products and synthetic fibers. Its key markets are China and India, the world's two largest nations. The Southeast Asian market is also expanding dramatically. A vibrant middle class has emerged among its 600 million people, driving growth. Demand is expanding in infrastructural, health, and information technology fields.

Masahiro Kozai, Managing Director of Kaneka Malaysia, says that, "In inland areas of Southeast Asia, automobile production has increased with the development of transportation networks, while the construction of stations and airports is underway. At the same time, people are reinforcing defenses against the rising incidence of coastal flooding. There's also rising interest in health and a rapid penetration of mobile devices in the region, and we can contribute in these areas."

Kaneka Malaysia has accommodated vibrant demand by building new plants and hiring more people since 2011. As a result, around half of the company's 400 or so employees joined recently. To ensure everyone shares the same corporate values, Kaneka Malaysia emphasizes 3C (Challenge, Concentration and Communication) online, in meetings, and on bulletin boards.

Mr. Kozai says, "Malaysians come from Malay, Chinese, and Indian religious and cultural backgrounds. I think communication is essential for internal unity and sharing information."

Minetoshi Marufuji
President,
Kaneka Asia Co., Ltd

Masahiro Kozai
Managing Director,
Kaneka (Malaysia) Sdn. Bhd.

Contributing to Malaysia's Growth by Cultivating Our Manufacturing Prowess and Human Resources

Syed Ahmad Syed Idrus Alhabshi
Director,
Plant General Manager,
Kaneka (Malaysia) Sdn. Bhd.

Ahmad Kamari Bin Nordin
Senior Manager,
HR & SHEQ,
Kaneka (Malaysia) Sdn. Bhd.

Fostering employees to strengthen corporate capabilities

While sharing values, Kaneka Malaysia also emphasizes education and training to foster leadership qualities.

With cooperation from Pahang Skills Development Center (PSDC) Kaneka Malaysia created a program that focuses on manufacturing knowledge and safety to assist its many new employees. All of them participated for around a month in this training program. Kaneka Malaysia additionally set up a re-training program. Upon completing their training program, new employees took part in the Buddy System for three to six months, the idea being to acquire skills from more experienced colleagues. Japanese staffers also helped train new employees as operators. A similar situation applied in back office areas like accounting and human resources. As well as rotating and re-training people, Kaneka Malaysia had employees undertake global training within the Group.

Syed Ahmad, Plant General Manager at Kaneka Malaysia says, "Improving skills eventually enhances the company's overall capabilities, so we spare no efforts in this regard. The long-term vision is for Kaneka Malaysia to spearhead the Group's production in Asia . We've never experienced such a rush in plant and production line construction, so this is a new challenge. But we hope to draw from our experience to progress in the years ahead."

Contributing to youth development

Since 2008, Kaneka Malaysia has cooperated with local universities and vocational high schools through its internship program. Although the company mainly accepts students with technical background, it program provides experience in various jobs, including human resources affair and logistics, and is very popular. Sometimes, students from Japanese vocational high schools take part. Kaneka Malaysia conducts factory tours for nearly 300 university students every year.

Ahmad Kamari, Senior Manager of HR & SHEQ at Kaneka Malaysia, says, "Most people know little about chemicals, and find them hard to understand. Recent business expansion has made us more visible in the local community, so more people are asking us about internships and plant visits. We aim to deepen understanding of our company and do more for the community by encouraging young people to become interested in chemical technologies."

Conducting courses and deploying on-site training to enhance employee safety awareness

Feedback from INSTEP and PSDC Trainees

Nurul Aida
SHEQ engineer,
Kaneka (Malaysia) Sdn. Bhd.

I have learned the basics of chemistry and electrical component for a month at the Institute Technology Petroleum PETRONAS (INSTEP). I was made acquaintances with lecturers and friends outside the company. I now have good contacts for advancement.

Tengku Ahmad Shafiq
Technician,
Kaneka Apical Malaysia Sdn. Bhd.

I attended a one-month course on industrial health and safety and handling chemical substances, mainly at the Pahang Skills Development Center. I now understand what work is about, including the safety aspects. I aim to apply my knowledge in the workplace and keep developing my skills.

Feedback from Internship Trainees

Interns learning from a Kaneka Malaysia employee

Ms. Fatasha Anis (left)
In my internship, I was assigned to a Career Seminar. I am grateful for that experience, as I think it was out of consideration for my aptitude, as my major is business administration.

Ms. Nor Shakiera (center)
I finished the internship and impressed with Kaneka's emphasis on education and people. And I was surprised that the managing director eats lunch with everybody else.

Prospects

Contributing to Asian society through localization

Kaneka Malaysia revamped its organization to accelerate a shift toward Asia. For example, local employees took over from Japanese expats to oversee production lines.

Mr. Kozai says, "Localization is enhancing employee satisfaction. They have the most ideas, and will help them succeed. Our next step is to cultivate local leadership, thereby benefiting Malaysia and, ultimately, the rest of Asia."

Many people attended POLISAS, engaging with Kaneka Malaysia employees

Message ▶ Stakeholder Message

Contributing to society by cultivating human resources

Mr. Mohd Anuar Bin Ali (left)
Mr. Mohd Nasrul (right)
Pahang Skills Development Center

The Pahang Skills Development Center was established by the federal government, the state, and private businesses to provide practical training programs. Since 2013, we have collaborated with Kaneka Malaysia to offer training on factory floor work principles for new and experienced employees.
Ongoing education is crucial for countries and regions to grow. We hope that Kaneka Malaysia will continue contributing the community by training employees.

Professor Dr. Zulkefli Bin Yaacob (center)
Ms. Mawarni Yismi Binti Mohd Yusop (left)
Ms. Wafty BT. Abd Rahman (Right)
Universiti Malaysia Pahang

To date, we interacted with companies through plant visits. We recently launched a unit to reinforce collaboration. Universities involve themselves in the latest academic research, with corporations exploring product technologies that contribute to society. If we collaborate with each other, we can help develop the nation. It is hard for the public to understand the chemicals business. So, I hope chemical companies to communicate more with the public and offer plant tours.

Che Alias Mohd Yusof
Deputy Director,
Polytechnic Sultan Haji Ahmad Shah (POLISAS)

Our students are accepted as interns in various workplaces at Kaneka Malaysia. Internships are great for student growth, so our school makes them mandatory. Internships are also very popular among students because they value the experience for preparing for their careers. Many are keen to enhance their practical experience. I hope that Kaneka Malaysia will continue to offer diverse internship programs that contribute to student learning.

Initiatives in Biodiversity

Kaneka closely monitors the impact of its corporate activities on ecosystems.
While providing environmental technologies and products,
we endeavor to reduce the impacts stemming from production.
As part of our social contribution efforts,
we collaborate and support diverse external biodiversity initiatives.

Participation in and Support for Biodiversity Initiatives

Kaneka participates in the following activities.

- Declaration of Biodiversity by Keidanren Promotion Partners
- Keidanren Nature Conservation Fund
- Keidanren Committee on Nature Conservation
- Japan Business and Biodiversity Partnership

Releasing Larva at Settsu-no-mori Kaneka Biotope

In November 2013, we released larva at an event that we sponsored with the Settsu Firefly Research Society at the Settsu-no-mori Kaneka Biotope on the premises of the Osaka Plant. We invited local children and their parents to release firefly larvae in the biotope, and showed them beetle larva before the release. The children also planted tulip bulbs, making the event even more memorable.

A biotope is an area with a brook where people can observe fireflies and other creatures. Our biotope is in a natural section of the Osaka Plant premises, which we lease to Settsu City.

In a few years, we expect the biotope to become an oasis for the community, with numerous fireflies and beetles.

Releasing the larva

New Employee Training at Kaneka Forestry for the Future

Since 2012, the Takasago Plant has participated in Hyogo Prefecture's private forest preservation project, undertaking maintenance and preservation at Kaneka Forestry for the Future in the town of Taka.

In 2013, we began using the forest as a site to conduct new employee training for graduates from high school, vocational high school, and university. Participants collaborated to trim and transport trees from mountain areas with poor footing. The program created team solidarity and deepened ties between the employees.

We plan to undertake around 15 afforestation activities covering approximately 15 hectares from June 2012 through to May 2017.

New employees working together to thin the forest

Proposing Sustainable Farming in Vietnam

KSS Vietnam Co., Ltd., which processes herbs and spices, began organically cultivating peppers three years ago. Vietnam is the world's biggest pepper producer, accounting for half of the global trade volume. At the same time, the usage of agrichemicals is rising in Vietnam, causing concern about soil contamination. KSS Vietnam decided to cultivate pepper organically because of the high demand in Europe for organic product and growing awareness of environmental issues.

Masahiko Miyai, president of KSS Vietnam, says that, "If you continue to use a large amount of agricultural chemicals, you will damage the soil. We want to propose sustainable farming for future generations."

This is the first organic farming experiment of its kind in Vietnam, and it has received recognition from the national government. We will continue contributing to sustainable farming.

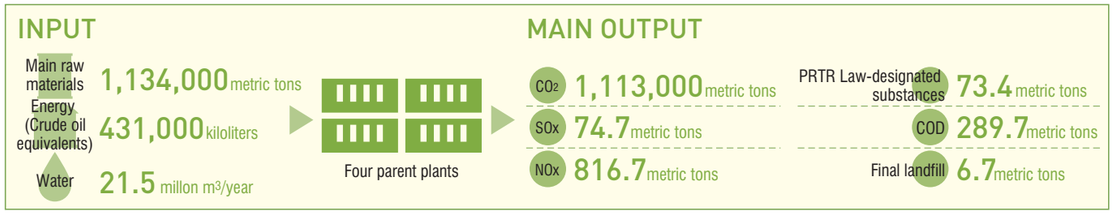
Pepper trees at a KSS Vietnam farm

A sample of the pepper harvest

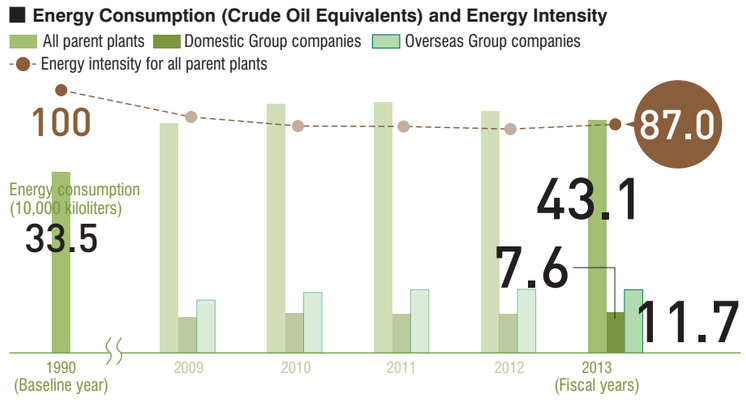
Materials Balance of Production Activities

The Kaneka Group's fiscal 2013 energy and resource inputs substance emissions,
and product commercialization are listed below.
A fire at an electrolyte facility of the Takasago Plant is outlined.

Materials Balance (Annual)



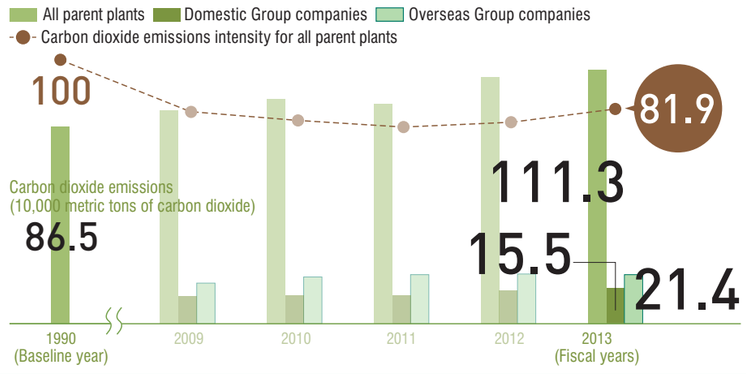
Energy Consumption (Crude Oil Equivalents) and Energy Intensity



The Kaneka Group strives to conserve energy and otherwise prevent global warming to reduce its energy intensity (see note 1). The energy intensity of our four parent plants in fiscal 2013 was 87.0, up 2.4% from a year earlier, due to reduced production volume and changes in the product mix and fuel mix. The five-year average was down 0.7%, which was below target. Energy consumption declined 3.7% from a year earlier to 431,000 kiloliters.

Note 1: Energy intensity is a numerical value calculated by dividing the energy used in manufacturing by the active mass, and indexing this figure against the baseline year of fiscal 1990. Active mass is a production volume benchmark.

Carbon Dioxide Emissions from Energy Consumption and Emissions Intensity



The Kaneka Group strives to reduce carbon dioxide emissions intensities by using the intensity index (see note 2) as a management indicator based on energy consumed during production. The carbon dioxide emissions intensity index of the four parent plants was 81.9, which exceeded the fiscal 2013 target of 79.4 by 3.1%, based on a fiscal 2020 target of 74. The main factor was the change in fuel mix. Carbon dioxide emissions from the four parent plants rose 2.9% from a year earlier to 1,113,000 metric tons. Another factor in the increases was an expansion in the carbon dioxide emissions coefficient in electricity purchased from power utilities, as nuclear power plants were offline.

Note 2: Carbon dioxide emissions intensity index: This measure against a fiscal 1990 baseline of 100 divides activity amounts (which Kaneka calculated the fiscal 1990 coefficient on a fixed usage basis) by carbon dioxide emissions from energy consumption in production activities. This made it easier to visualize the impact of the Company's activities. We set our fiscal 2020 target using that index.

Fire at Takasago Plant Electrolyte Facility

At approximately 7:57 p.m. on March 16, 2014, fire broke out at an electrolyte facility of the Takasago Plant (in Takasago, Hyogo Prefecture). Kaneka employees immediately contacted a local public firefighting team and initiated their own firefighting procedures. The cause was a short circuit in a cable of a device monitoring the electrolysis tank.

After re-checking all lines within the plant, we reported to Takasago's firefighting headquarters that we did not identify any safety issues and were given approval to resume operations.

To avoid a recurrence, we will confirm insulation everywhere with the potential for fire when subjected to higher-than-allowable currents within the plant. At the same time, we will share information with other plants to help prevent similar accidents.

Developing Products to Reduce Bone Fracture Risks in the Elderly after Falls

Kaneka develops products that support healthy living for a growing number of elderly people.

Reducing Impact from Falls without Compromising Comfort

Kaneka developed Kaneka Hip Protector, which incorporates an impact-absorbing pad and a dedicated inner wear.

Femoral neck fractures are a major cause of many older people becoming bedridden, with numbers of such patients projected to reach 300,000 in Japan in 2030. Hip protectors could help reduce this number of people. However regular models are uncomfortable because the impact-absorbing pads are hard and thick, so they have not become popular.

Kaneka began joint research with a university on a hip protector using foamed SIBSTAR, a Kaneka-developed resin. We studied fall patterns and innovated a pad that is thin but absorbs impact. We tested user comfort and other factors and evaluated the results, leading to a protector that people can wear comfortably for long periods of time.

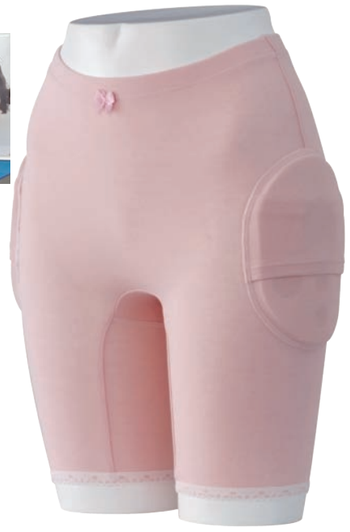
In spring 2014, Koyo Disposable Goods Co., Ltd., an adult paper diaper manufacturer, adopted the pad in a new offering that protects the hips by attaching one of our pads. The product was unveiled during Barrier Free 2014 at Intex Osaka in April 2014, and attracted many industry participants.

Preventing bone fractures among the elderly is a key social issue not just from the viewpoint of maintaining quality of life, but also from the perspective of reducing the burden of carers and healthcare costs. We will look into developing products for males as well.

Hip protector pad

Scene at Barrier Free 2014, a comprehensive welfare exhibition

Employed in Koyo Disposable Goods' hip bone guard product by attaching it to a paper diaper



Kaneka Hip Protector for female innerwear. Recommended by the Japanese Society for Fall Prevention

Employee Feedback

Seeking to Help the Elderly Lead Enjoyable Lives

Miaki Shibaya
Frontier Materials Development Laboratories

SIBSTAR is a thermoplastic elastomer based on Kanaka technology. It offers excellent impact absorption and chemical resistance and is easy to process. We developed a foam version of SIBSTAR by combining our technologies.

After repeated computer simulations and performance evaluation tests, we developed a hip protector pad (see photo). The pad five smaller and larger holes to optimize impact dispersion, yet the material is just 6 millimeters thin.

Through my involvement with this project, I became a qualified welfare equipment counselor. It will be a pleasure to promote this product around Japan to help senior citizens live more enjoyable lives.

From Quality Assurance to Quality Management of Business Activities with 100% Participation

The Kaneka Group's business extends beyond chemicals to include diverse domains such as the environment, food, medicine, and healthcare. We are experiencing downstream growth in growth areas and are diversifying into such fields as tissue regeneration and cell therapy.
Thus it is becoming more important to reinforce customer communications and other overall operations, not just quality assurance.

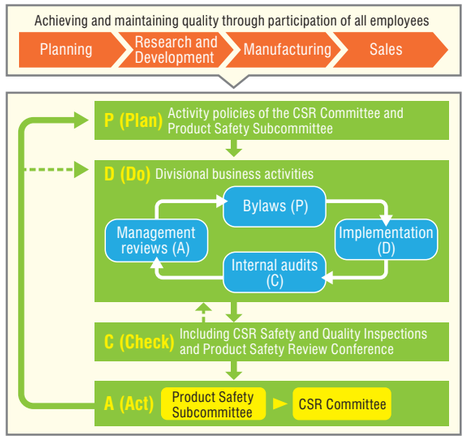
PDCA Cycles Based on Quality Management Rules

We are expanding from business-to-business to business-to-consumer domains. In both fields, the quality requirements include performance and features, safety, and reliability. In business-to-consumer areas, however, overall quality is more important than before, including technical support and claim and inquiry responses, as well as efforts to identify target customers, product uses in the market, and customer needs.

We consider it important to reinforce the management of overall business activities, developing quality that satisfies customers, with all employees participating in product supply, while the development, design, manufacturing, procurement, and sales units undertake individual roles to improve operational quality. In keeping with this approach, we established our Quality Management Rules in 2013. Each division has its own PDCA cycle, which more precisely represents the rule bylaws as "Plan," implementation as "Do," internal audits as "Check," and management reviews as "Act." We have a larger PDCA cycle to cover each activity. "Do" is the aggregation of each activity, "Check" is for such companywide inspections as CSR Safety and Quality Inspections, the Product Safety Review Conference (see note 1) and Catalog Reviews (see note 2), "Act" is improvement planning for the next fiscal year in the Product Safety Subcommittee (see note 1) and CSR Committee, and "Plan" is for planning initiatives for the next fiscal year.

Note 1: The Product Safety Subcommittee is under the CSR Committee. The members of its Product Safety Review Conference head the environmental, safety and quality divisions, research and development, manufacturing activity, and legal affairs units.
Note 2: A Catalog Review entails checking the suitability of catalog text, instruction manual contents, and labeling to ensure that customers can use products correctly.

■ **The Kaneka Group's Quality Management (PDCA)**



Product Safety Subcommittee

Employee Feedback

Heeding Customer Feedback and Gaining Trust

Natsuki Mori, Manager of the Products & Safety Quality Assurance Group of the Responsible Care Department in the Production Technology Division (pictured on the right), says that, "Kaneka's business is becoming more oriented toward end-users, so we need to focus more than ever on customer feedback to maintain quality. At the same time, we are ensuring product safety based on usage other than the original intent and use by children."

Kenji Yoneda, Products Safety & Quality Assurance Group of the Responsible Care Department in the Production Technology Division (pictured on the left), says that, "There are many examples of businesses that jeopardized their existence by introducing problematic products. Kaneka's offerings must not cause problems for stakeholders. We have committed ourselves to quality management to avoid such situations."

Caring for Our Employees

Creating a Culture in which Everyone Thinks Seriously about Safety

In 1994, Takasago Plant began hands-on learning to improve the mindset of employees in regard to safety. This training has expanded throughout the Kaneka Group.

Training to Ensure Safe Behavior and Prevent Accident Recurrences

Takasago Plant has experienced explosions and other accidents before, so it began hands-on learning about explosions and oxygen depletion as part of our commitment to prevent other serious accidents. We try to identify workplace risks by showing workers how dust explosions and other mishaps occur and highlighting potentially risky processes.

We are constantly updating training materials based on occupational accident cases, such as being caught in machinery. We are extending the training beyond Kaneka employees to include operators at partner companies. In hands-on learning, we ensure that workers realize the dangers by making mock accidents more realistic. For example, we place work gloves on sticks to function like arms or show actual equipment or devices involved in accidents. We are endeavoring to educate workers about the importance of acting safely.

We have installed the same hands-on learning facilities at three other Kaneka plants. The Takasago Plant has started training workers from neighboring companies. To date, we have trained 1,500 people from approximately 50 companies.

We have mobile hands-on learning equipment to enable training for Group companies around Japan.

Training employees based on accident predictions to improve sensitivity

Conveying accident risks more realistically by using a stick modeled as an arm wearing a work glove

Hands-on learning using the same equipment involved in previous accidents to prevent recurrences

Employee Feedback

It is Important for People to Understand that Occupational Accidents are Not Someone Else's Problem

Takao Okimi of the Environmental Protection & Safety Group in the Environmental Protection & Safety Management Department (at the time, pictured on the right), says that, "The Takasago Plant makes chemicals, so while it might seem safe, there are many unseen dangers. It is important to learn from the past so we all understand how hard it is to maintain safety. Kaneka has experienced a fatal accident before, but fewer and fewer people remember this. So, we must avoid forgetting by educating people about earlier disasters."

Itsuro Ito of the Environmental Protection & Safety Group in the Environmental Protection & Safety Management Department (pictured on the left), says that, "I provide instruction in hands-on learning. I think it is important to cultivate an ability to sense the risks and avoid accidents. For example, it is important to avoid pointing at things and calling out without a sense of purpose, because simply doing so out of habit can be very dangerous. When I was younger, I knew of the death of a worker younger than myself. It is my duty to communicate to people that occupational accidents are not someone else's issue."

Working with Business Partners

Procuring Raw Materials from Multiple Sources to Stabilize Product Supplies

Based on lessons learned from the Great East Japan Earthquake and accidents at the chemical plants of other companies, Kaneka procures raw materials from multiple sources to reinforce its supply chain.

Creating New Production Processes to Fulfill Supply Responsibilities to Customers

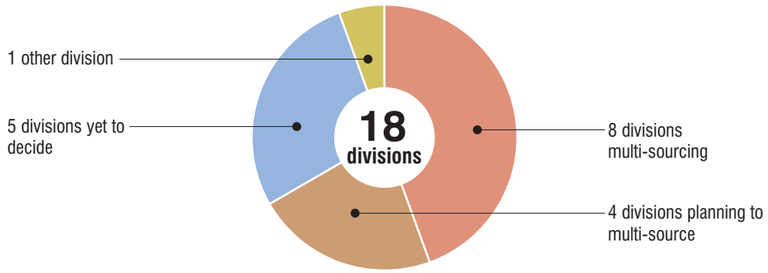
Kaneka ensures stable supplies to customers by maintaining multiple production units while multi-sourcing as many of its raw materials as possible.

We evaluate matches of alternative raw materials with existing products and have customers assess prototypes employing such alternatives. As it takes a lot of time and effort to confirm that there are no issues, we install manufacturing lines that can accommodate multi-sourcing when starting up overseas production facilities.

Kaneka Malaysia will begin producing Kanekalon at a new facility in 2015.

Because this is a proprietary offering, it will be a top priority to strengthen the supply chain through multi-sourcing so we can fulfill our supply responsibilities. We will push forward with manufacturing based on multi-sourcing from the product design and process engineering stages to reinforce supply stability.

■ **Multi-sourcing of raw materials by Kaneka division**



Two-thirds of divisions currently multi-source or plan to do so.

■ **Process toward multi-sourcing**

Meeting of chemicals purchasing managers

Employee Feedback

Optimizing Overall Global Procurement

Shigeru Umeda
Team Leader, Purchasing Team II, Chemicals Purchasing Department

Because Kaneka seeks to deliver high quality at low prices, the key activities in the Chemicals Purchasing Department are to recommend alternative, cost-reducing raw materials to manufacturing units. Although securing alternative raw materials is important for stabilizing supplies, production sites would be reluctant to use materials that raise costs. Sites become eager to use alternatives that can help lower expenses.

As part of efforts to minimize exposure to disasters and other risks, the Chemicals Purchasing Department gathers information on the raw materials that overseas plants procure and the suppliers they use. I believe that the Chemicals Purchasing Department in Japan will play a central role in optimizing the Kaneka Group's procurement worldwide.

Stakeholder Dialogues

Kaneka conducts stakeholder dialogues to share differing opinions on common issues and to deepen mutual understanding in the process.
Since 2011, the company's business sites have continued to engage in dialogue, focusing on local government officials.
Our fourth stakeholder dialogues were with officials from Kamisu, Ibaraki Prefecture, which is home to the Kashima Plant.

Fourth Stakeholder Dialogue

In February 2014, we conducted our fourth dialogues with external stakeholders to learn more about their evaluation and opinions, and to seek direct feedback about our CSR activities and confirm the direction of our efforts.

Stakeholder dialogues are about sharing differing opinions on common issues, deepening mutual understanding in the process.

We conducted a broad discussion with local government officials about the CSR Communication Book 2013, which we issued in July 2013.

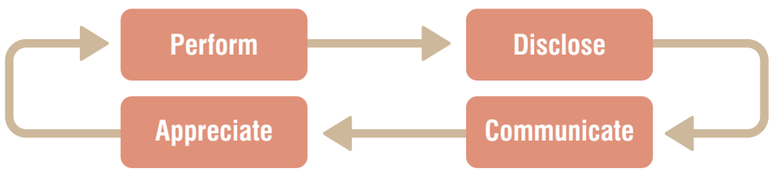
Dates and Locations
February 19, 2014 at Kamisu City Hall, Ibaraki Prefecture

The Kaneka Group will continue conducting stakeholder dialogues about CSR issues.

Participants exchanging different opinions

■ Kaneka's stance on building trust through stakeholder dialogues

Model for building trust (through a type of PDCA cycle)



We aim to reinforce trust through this PDCA cycle.

Participating Kamisu Municipal Government officials

Osamu Noguchi
Education Director

Toshiaki Takayasu
Health and Welfare Director

Tetsuo Yamaguchi
Industry and Economics Director

Yoshio Noguchi
Planning Director

Masanobu Noguchi
Administration Director

Mitsumasa Nishino
Civil Life and Environment Director

Hiroki Kaito
Urban Development Director

Topic 1
The Kaneka Group's corporate approach, including CSR activities based on core business activities and TV commercials to raise awareness.

Opinions of Kamisu Municipal Government Officials	Kaneka's Responses
○ Kaneka makes its CSR activities very easy to understand by stating they are about being useful to society. Many companies engage in CSR, but I think Kaneka is a step ahead in its efforts. Although Kamisu considers it important to reinforce the functions of the Kashima industrial complex, what is Kaneka's position on this, particularly regarding post-quake initiatives?	● We will continue to contribute to society through our core businesses. No single company can strengthen the operations of an industrial complex, and we would like to move forward with the cooperation of the authorities. We believe it is important for the community to understand that materials producers like Kaneka make the essentials of modern living.
○ I think that Kaneka's TV commercial vividly links its slogan of leveraging science to make wishes come true to trust in its products. Has the mindset of employees changed since you started running these commercials?	● We started running TV commercials in January 2011. Some employees used to think that advertising was unnecessary because it was fine for the general public not to understand business-to-business enterprises like ours. However we now recognize the importance of activities that raise our profile.
○ Ibaraki Prefecture ranks second in Japan in terms of the value of its agricultural output. Kamisu is first in terms of green pepper production, and it grows a lot of other agricultural offerings. We use a lot of polyethylene plastics, and disposal is an issue. We are very keen for you to develop technologies for plant-derived plastics that could be used in all areas of agriculture.	● Our core Takasago Plant in Hyogo Prefecture maintains a demonstration facility that can produce 1,000 metric tons annually of biopolymers and which is running at full capacity. The usage rates of multi-film applications are high in Europe, and we have created techniques to adjust degradation periods. We will push ahead with development to expand applications.

Topic 2
Disclosure and environmental initiatives to enhance community trust.

Opinions of Kamisu Municipal Government Officials	Kaneka's Responses
○ I think the site visits by top management for CSR purposes are a wonderful approach. I sense a strong commitment to safe operations through such other efforts as third party evaluations by other plant managers and university professors. Communities seek safety above all from companies, and we hope you will broadly publicize your safety initiatives.	● Top management will continue to visit sites. We will continue to disclose information on our safety efforts through our CSR report while disclosing information to the community and other stakeholders.
○ I believe that Kaneka has made safety a top commitment as stated by the president. I think that disseminating information as swiftly and accurately as possible after an accident will contribute to the safety of citizens. What steps is Kaneka taking in terms of risk predictions and other aspects of safety?	● It is important for employees to have a disaster-prevention mindset. In trying to protect themselves they also safeguard their families and the community. Good examples of this are our ongoing emergency response drills, verification efforts that include considering accident case studies at other companies, companywide preparation drills, and reviews of manuals.
○ I think it's wonderful to engage with the community through vehicles like this dialogue session. I also think your appreciation of employees will help to enhance community confidence.	● We conduct regular stakeholder dialogues every year to exchange opinions on our CSR activities.

Our response to stakeholder opinions and requests

Our fourth stakeholder dialogue revealed the extent to which stakeholders consider the CSR activities of the Kaneka Group acceptable or inadequate, and highlighted the areas requiring improvement.

We believe that pursuing CSR through core businesses and enhancing stakeholder satisfaction will help us to enhance enterprise value and fulfill our corporate responsibilities. We will discuss the valuable points and opinions we received with related departments to bolster sustainable CSR activities.

Dialogue held on August 23, 2013, with the Union of Takasago Residents' Associations

The Takasago Plant conducted a stakeholder dialogue with the Union of Takasago Residents' Associations to deepen understanding of Kaneka's corporate activities.

At the gathering, plant representatives presented activities at the site and at Kaneka, explained safety efforts at the plant, and responded to questions. We received valuable opinions and requests from resident association heads. The plant then conducted a bus tour of its facilities, pointing out the mountain of salt as well as the oil and fat production processes. The plant manager delivered a speech to the participants, saying that, "We implement thorough measures regarding safety, environmental protection, and disaster prevention as the top priorities of our corporate activities. We will continue doing our best in community initiatives as a properly run facility". The Takasago Plant will endeavor to operate even more transparently in building relationships with the community through ongoing dialogue.

Plant tour participants viewed the mountain of salt, which is a raw material in our chemical products

Fostering Youth

Kaneka does much to foster youth in the communities in which it operates and throughout society.
In fiscal 2013, we took part in the first Children's Chemistry Show in western Japan. Core-Net, a nonprofit organization of retired executives, whose members include Kaneka retirees, provided educational assistance at elementary and junior high schools.

Participating in a Children's Chemistry Show in Kobe

The Children's Chemistry Show in Kobe was held on January 25 and 26, 2014 at the Kobe Science Museum. The sponsor of this event for elementary and junior high school students was Dream Chemistry 21. The Japan Chemical Industry Association is one of the organization's four constituent members. This was the first Children's Chemistry Show in western Japan, the program having started in Tokyo and expanding to Natori, Miyagi Prefecture, in fall 2012.

The Kobe event attracted around 3,300 people. About 250 children visited the Kaneka booth to learn how to make erasers.

The children put on gloves and goggles, mixed hardening chemicals and resin, and shaped the compound as desired. They initially wondered whether their creations would truly erase anything. After heat-treating the material, they and their parents were delighted to discover that they did.

We look forward to continuing to help foster youth by participating in another Children's Chemistry Show planned for western Japan in fiscal 2014.

Children experiencing the marvels of Kaneka's materials

Children crafted their very own erasers

Kaneka Manufacturing Class

Pro bono activities leveraging professional expertise are becoming more popular in Japan. NPO Core-Net is part of the pro bono movement, passing down manufacturing knowhow to support elementary and junior high school education.

In November 2013, we initiated the Kaneka Manufacturing Class program for 80 students in the sixth grade at Takasago Elementary School, which is located near the Takasago Plant. The second such class was for 50 students in the fifth grade at Senrioka Elementary School near the Osaka Plant, where participants assembled scroller kits.

Kaneka participants on both days were mainly new plant employees. They instructed and assisted the students, imparting an interest in manufacturing and a sense of achievement from taking part. The students greatly enjoyed the experience.

In fiscal 2014, we look forward to holding these classes at other schools near our facilities as part of our commitment to contributing to society by fostering youth.

Unveiling scroller assembly kits in the gym

Kaneka employee instructing students

Reconstruction Support to Date and in the Future

Since the Great East Japan Earthquake three years ago, the Kaneka Group has supported relief and reconstruction efforts. Here, we present our support initiatives to date. We will continue to assist in various ways with reconstruction. (Please see the PDF version for details.)

To Date and in the Future

Monetary contributions at the time of the earthquake in 2011 (55,650,000 yen)

Supplies
Including solar power systems, carpets (for protection from the cold), insulation materials, and soaps

Iwate Prefecture

Products supplied by swiftly restoring factories
The earthquake damaged the Kashima Plant, which was making products in high demand in affected areas, including materials for blood bags. We switched production to facilities in western Japan and swiftly restored plant operations (fully back on line 45 days after the earthquake)

Volunteer activities
Participating in the Fukushima Sunflower Foster Parent Project
The Shiga, Kashima and Osaka Plants have participated in the Fukushima Sunflower Foster Parent Project to decontaminate radioative soils in Fukushima Prefecture.

Support at various events
Since 2012, we have expanded restoration support by undertaking Tohoku produce fairs at summer festivals and by engaging in donation drives.

Miyagi Prefecture

Participating in the IPPO IPPO NIPPON Project
Since 2013, Kaneka has donated 500,000 yen every year for the earthquake support activities of the Japan Association of Corporate Executives, which entail providing educational equipment to vocational high schools in coastal areas of the Tohoku region.

Donating 12,700,000 yen to Kesennuma
The Kesennuma Marine Resource Application Study Group will use these funds to create new local industries and employment opportunities (this initiative began in April 2014).

Reconstruction Support Topics

Support through products

Reconstruction support along the highways of disaster-affected areas
A large engineering foam block for road foundations, Soil Block has been used for reconstruction in disaster-affected areas since 2012.

Fukushima Prefecture

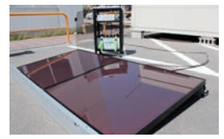
Creating employment

Reconstructing the sole polystyrene foam molded products plant in Kesennuma, Miyagi Prefecture
A tsunami washed away the facilities of Kanae Co., Ltd. a Group company in Miyagi Prefecture, forcing it to shut down. It was reconstructed in May 2013. We plan to generate local employment opportunities and support the rebuilding of local fisheries.

Support through products

Supplying Kaneka Biosurfactant, a radioactive decontamination detergent
This biodegradable detergent made of bacteria related to the Bacillus natto washes away soil particles contaminated with cesium and other substances. Since 2012, it has been used in areas designated for decontamination.

Kanecaron



Solar power generation system

Liquid hand soap

Support at various events

Fukushima Sunflower Foster Parent Project

Handing over a list of items donated to Kesennuma City (from left, Kesennuma Mayor Shigeru Sugawara and Ikuo Aoi, General Manager of the Foam Plastics and Plastic Products Division)

Soil Block

Kanae Co., Ltd. resumes fish container production

Decontaminating road washer

Group Company Initiatives

Group companies practice CSR in Japan and abroad.
While initiatives have a local focus, they all share the same objective of contributing to society through chemistry.
(Please see the PDF version for details.)

Undertaking development and sales actively to present socially beneficial new technologies

Kaneka Taiwan Corporation

Kaneka Taiwan Corporation functions as a key Asian base for customer-focused development and electronic materials sales. This subsidiary also surveys markets and provides sales support for other operations, including new businesses. We emphasize compliance education for employees and look to help develop and market new technologies that benefit society.

Contributing to quality of life by developing and supplying safe, high-quality products

Kaneka Pharma Europe N.V.

As a Euorpean base for life sciences products, Kaneka Pharma Europe N.V. recently started supplying such high-quality functional food materials as reduced foam coenzyme Q10 (Ubiquinol). In the medical equipment field, the Liposorber System, a hyperlipidemia treatment device, is commanding great attention in Europe and elsewhere. In addition, it developed and secured market approval for a cell separation device, in which we look forward to enhance medical practice.

Constructing an on-site product recycling station to foster recycling

Kochi Styrol Co., Ltd.

Kochi Styrol Co., Ltd. manufactures and sells expandable polystyrene products in the Chugoku and Shikoku regions. Expandable polystyrene conserves a lot of resources as it is 98% air as a result of its manufacturing method. It is easy to recycle and is an excellent material from an environmental perspective. Kochi Styrol built EPSY Plaza on its premises to support resource reycling.

Raising quality assurance to the highest level in the industry to respond to customer demand

Kaneka Sun Spice Corporation

Kaneka Sun Spice Corporation's main business is powdered spices processed using proprietary sterilization and powdering technologies. We lead the market in commercial peppers. Maintaining good relationships with communities near production facilities is essential and we thus focus on communicating with these communities. We are also promoting various initiatives to attain the industry's best quality assurance by improving product safety.

Aiming to become a solutions developer and provider

Tamai Kasei Co., Ltd.

Tamai Kasei Co., Ltd. was established as a manufacturing and processing maker of expandable polystyrene products. Tamai Kasei is development-driven. We are focusing on the commercialization of temperature management containers that combined expandable polystyrene with cooling and heat storage materials. These are passive solutions that do not emit carbon dioxide. We will continue to develop socially and environmentally beneficial offerings in the years ahead.

Patthermo refrigerant and heat-retention materials are used for the temperature management transportation packages. They are also used for the fixed temperature transportation of medical and other products

Kaneka's CSR Activity Performances and Evaluations

Kaneka's CSR activties performances and evaluations in fiscal 2013 are as follows.
(Please see the PDF version for details.)

■ **Kaneka's CSR Activity Performances and Evaluations**

Significantly outperformed / Achieved/nearly achieved / Underperformed / Significantly underperformed

Key Stakeholders	Item		Fiscal 2013 Results	Results Evaluations
All Stakeholders	CSR Management	Management CSR Safety and Quality Inspection	• We implemented management CSR Safety and Quality Inspections at all parent plants, 17 plants of 15 domestic Group companies, and five overseas Group companies as scheduled.	
		CSR Implementation	• Held meetings of CSR Committee and four subcommittees as scheduled. • Disseminated information regularly through the intranet and fostered employee understanding of CSR through the CSR handbook (Practical Guide). • Conducted job-specific and other training 28 times.	
		Bolster Governance and Compliance	• Conducted CSR suitability audits for Kaneka Group operations in Japan, the United States, and Europe. • Handled four inquiries through compliance consultation desks. • Improved internal control levels through creation of a holding company.	
		Reinforce Risk Management	• Undertook drills to prepare for an earthquake in eastern Japan, with this initiative reflecting the results of the previous fiscal year's drills to prepare for an earthquake along the Nankai Trough.	
Shareholders and Investors	Timely and Appropriate Disclosure		• Issued business reports, financial results, interim reports for shareholders and other investors, and other investor relations materials.	
The Environment	Environmental Protection Improvement (reducing environmental impact)	Reduction of Volatile Organic Compound (VOC) Emissions	• At 1,853 metric tons, we failed to meet our target for the year of 1,850 metric tons.	
		Reduction of Industrial Waste	• Kept the final landfill rate to below 0.01% for all parent plants, attaining zero emissions, below 0.2%, for eight consecutive years. • Domestic Group companies attained a final landfill rate of 0.08%, down from 0.22% a year earlier, thus maintaining zero emissions.	
			• We checked compliance among waste contractors and confirmed the absence of problems.	
		Prevention of Global Warming	• Energy intensity (see note 1) was 87.0, up 2.4% from a year earlier, but the 0.7% average cut over five years was less than the target reduction of 1% annually. • The carbon dioxide emissions intensity was 81.9, or 3.1% above the target of 79.4.	
			• Reached the energy intensity target (see note 1) with a reduction of 2.7%, while the average reduction over five years was 3.5%, enabling Kaneka to reach this target as well.	
		Preservation of Biodiversity	• Undertook initiatives as part of social contribution efforts centered at the Takasago and Osaka plants.	
Customers	Customer Satisfaction (ensuring quality and product safety)	Quality Management	• We consolidated the Quality Assurance Rules and Product Safety Management Rules into the Quality Management Rules. • We instituted the Change Management Standards to oversee all environmental, safety, and quality changes.	
		Chemical Substance Management	• We ensured thorough compliance with regulations and obtained timely information on regulatory revisions in Korea, Taiwan, China, the United States, and Europe, and shared it internally.	
Vendors	Bolstering Distribution Safety		• The Takasago Plant collaborated with transportation companies in patrolling sites to check that people carry Yellow Cards, while the Osaka Plant identified unsafe locations during cargo handling and examined improvements. • We conducted legal compliance checks and voluntary inspections of mobile tanks.	
			• The Kashima Plant collaborated with transportation companies to check and reconfirm the emergency contact network. The Takasago Plant undertook Hiyari Hatto (identifying, reporting, and eliminating worker danger) initiatives.	
	Proper Procurement	Green Procurement	• Internally publicized and set up a structure for green procurement, undertook efforts to help suppliers obtain ISO 14001 and other certifications, and initiated audits of the contamination of raw materials with prohibited substances. • Instituted Green Procurement Standards.	
Employees	Reinforcing Occupational Safety and Health	Occupational Safety	• All four parent plants reinforced near-miss and hazard prediction efforts. • Domestic Group companies used hands-on learning equipment to enhance safety sensitivities and bolstered hazard prediction activities.	
		Management Systems	• The CSR Safety and Quality Inspections of domestic Group companies clarified strengths and weaknesses by undertaking assessments with benchmarks that indicate the maturity levels of initiatives.	
		Occupational Health	• Held seven mental health training courses for 266 participants. • Surveyed mental healthcare at domestic Group companies and identified issues.	
	Emphasis on Diversity	Respect for Human Rights	• Educated 109 new employees in april 2013 and 44 newly promoted executives about human rights. Held seven intercultural communication classes during the year.	
		Employing, Training, and Recruiting Diverse People	• Instituted research job rankings in April 2013 after conducting around 80 briefings to oversee and ensure understanding of the system. We hired six foreign nationals (four technical and two clerical) in April 2014 under this setup.	
		Work-life Balance	• Continued to assess the need for a work-at-home system to promote the interests of women (particularly from a work-life balance perspective).	
		Labor and Management Relationships	• Held labor and management meetings at almost all business sites during the 2013 spring wage negotiations.	
Society	Reinforcing Process Safety and Disaster Prevention		• Engaged with third parties in efforts to ensure the safety of hazardous substance storage tanks and identified process risks. • Responded to safety evaluations by identifying the strengths and weaknesses of security and disaster prevention setups.	
	Improving Communication with Society		• Issued a CSR report and posted it on our website. • Continued to engage in shareholder dialogue. Held youth events.	
			• Issued site reports for all parent plants and posted them on our website.	

Note 1: Energy intensity is a numeral value calculated by dividing the energy used in manufacturing by the active mass and indexing it against the baseline year of fiscal 1990.

Third-Party Opinion

My Impressions from Reading CSR Report 2014

Chieko Minami
Doctor of Commerce and Professor of Marketing,
Graduate School of Business Administration, Kobe University.

Graduated from the Faculty of Letters of Kobe University.
Completed a Master's Degree in Communication from the Graduate School of Michigan State University.
Completed the first semester of a doctoral course at the Graduate School of Business Administration, Kobe University.
Left late in doctoral course.
Assistant Professor, Faculty of Economics and Business Administration, Yokohama City University.

Presenting Evidence and Providing Explanations to Secure Stakeholder Understanding

In preparing to write my second third-party opinion for Kaneka, I went back over what I wrote for the fiscal 2013 version. I laud Kaneka's efforts, as I noted many improvements. They were not just for the issues I raised but also as a result of reader questionnaire feedback and stakeholder dialogues.
That said, as the Administration Office has also indicated as requiring improvement, Kaneka still needs to explain its criteria for setting up CSR activity targets and self-assessments. For example, why was it unable to attain its work-life balance objectives in its initiatives for employees? How might the company address this? I could not find the answers. So, I would like to see the bases for the numerical targets. This is because people may mistakenly conclude that Kaneka only formulates goals that are easy to reach. Particularly in the environmental arena, it must have been very hard for Kaneka to formulate numerical targets for Japan, which is advanced in environmental requirements. A lack of background explanation on the significance of goals for reducing environmental impact indicates that Kaneka is not sufficiently conveying to readers its strenuous efforts to reach its objectives.

On the other hand, the Top Management Commitment section describes Kaneka's commitment to technological development that is driving social progress. The subsequent Why CSR? pages properly explain Kaneka's CSR objectives, using a Q&A approach to overview social contributions through its core businesses as a chemical company.
The term CSR seems to have become part of the social fabric, but I think many people still think that CSR is just about volunteering or donations and do yet fully realize that CSR is about contributing to social development in the course of business. It is important to continue communicating clearly and presenting specific examples, in order to gain stakeholder understanding.

Continuing to Contribute to Society through Core Businesses and Globally Conveying Kaneka's Value

I specialize in business-to-business marketing, so what I found the most interesting in this year's report was Special Feature Article I on thermal solutions. The article discusses how Kaneka's new graphite sheet has contributed to thermal solutions for mobile devices.
As consumers, we think of the finished product, such as a mobile phone or tablet. The article explains how changing the internal material could dramatically improve performance, highlighting the struggle of a salesperson to grow the market. I found the story an interesting example of how a materials company can offer new value to a market through sales activities and thereby contribute to social progress.

Manufacturers today have to provide new "value" to resolve social issues by moving one step away from conventional manufacturing. This reality also applies to materials producers.
Given such a situation, it is very common to review corporate philosophies and visions to answer several questions. Why do companies exist? How are they useful to society? And in what direction do companies wish to head? There is a growing need to demonstrate corporate value internally and externally.

Kaneka's message of making wishes come true through science, presented at the start of the Top Management Commitment section, properly conveys Kaneka's value. I expect the company will more broadly communicate a globally valid message about how Kaneka delivers value by contributing to society through its core businesses.

Suggestions and Improvements from the 2013 Report

Kaneka made the following improvements in response to Professor Minami's suggestions regarding the 2013 version.

1. It would be better to provide more background information on how we set up targets for activities.	→ In the PDF version, we tried to present the bases as much as possible for setting targets. We think this is still insufficient, and we aim to expand the relevant content.
2. It would be better to change the pagination on the Kaneka Group's corporate philosophy and position CSR to describe the value that the Group creates.	→ We followed Professor Minami's advice and positioned CSR after the Top Management Commitment section to convey the importance of CSR in the Kaneka Group. We also endeavored to convey the connections between our businesses and CSR through the Special Features and Highlight articles.

Meeting between a member of the Administration Office CSR Committee and Professor Minami

Editorial Afterword

Editorial Afterword
(Response to Third-Party Opinion)

This is the second year since we renamed the digest version the Communication Book to position it as a tool for communicating with stakeholders.
In the opening Top Management Commitment section, the new president expressed his intent to overcome existing boundaries to build a trusted reputation for bringing people and technology together, thereby contributing to social progress. We consider it important to emphasize the inherent concept of CSR as contributing to social progress through core businesses. With that in mind, we inserted the Why CSR? section in a Q&A format style early in the report. We will continue to enhance stakeholder satisfaction by conveying CSR activities through core businesses and providing specific examples.
For the 2014 version, we again asked Professor Chieko Minami to write the Third-Party Opinion. She indicated several improvements that she would like to see. These include presenting the bases of numerical targets for CSR activities and their backgrounds and communicating a globally valid message about how Kaneka delivers value by contributing to society through its core businesses. We will make these changes accordingly in our next CSR report.
We would appreciate on any feedback on the initiatives we have introduced in the report, and appreciate you taking the time to read it.

Administration Office
CSR Committee
Kaneka Corporation

● Editorial Policy
The Communication Book presents simplified content for those learning about Kaneka for the first time or those wishing to gain an overview of our CSR activities.
This edition explains how Kaneka's business activities relate to CSR, and features information of particular interest to stakeholders, most notably the Kaneka Group's relationships with customers, the environment, and society.
The PDF edition discloses all of our CSR information. You can download a copy at the following
URL:http://www.kaneka.co.jp/kaneka-e/csr/index.html

● Organizations Covered in This Report
This report covers Kaneka Corporation and its domestic and overseas consolidated subsidiaries.
The data on Responsible Care activities encompass the parent and all 38 Group production subsidiaries.
In this report, "the Company" or "Kaneka" refers specifically to Kaneka Corporation. The "Group" or "Kaneka Group" encompasses Kaneka and its consolidated subsidiaries. References to "Group company/companies" do not include Kaneka Corporation.

● Language Versions
We publish the Communication Book in Japanese and English.

● Third-Party Verification and Opinions
The Japan Chemical Industry Association verified the environmental data in this report. Professor Chieko Minami of the Graduate School of Administration of Kobe University provided a third-party opinion of the overall content.

● Report Period
This issue covers fiscal 2013 (April 1, 2013 to March 31, 2014) with some additional information outside this period.

● Date of Publication
September 2014

● Publication of the Previous Report
September 2013

● Next Report
September 2015

● Reference Guidelines
The Global Reporting Initiative's Sustainability Reporting Guidelines 2006 and The Environmental Reporting Guidelines (2012 version) issued by the Ministry of the Environment of Japan.

● Inquiries
Kaneka Corporation
Administration Office CSR Committee
2-3-18, Nakanoshima, Kita-ku, Osaka 530-8288, Japan
Tel: +81-6-6226-5091
Fax: +81-6-6226-5127
http://www.kaneka.co.jp/kaneka-e/

Note: We have included a questionnaire form with this report and invite you to record your opinions and impressions to help us improve our initiatives and disclosure in the years ahead.