

UNITIKA
We Realize It!

UNITIKA 2013
CSR Report

 **UNITIKA Group**
Corporate Social Responsibility Report 2013



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UNITIKA Group

Corporate Social Responsibility Report 2013

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On the publication of our CSR report



Kenji Yasue
President



An Unchanging Approach

Since our founding in 1889, Unitika has always conducted business activities designed to harmonize with the local area and society at large. Our forerunner, Amagasaki Spinners, is said to have been founded to contribute to the local area in the wake of Japan's abolition of the feudal clan system, seeking to revitalize the demographics of the local area by starting a new industry. Unitika has grown along with the local area, society, users and other stakeholders, while continuing to pursue an approach of mutual prosperity through harmony designed for fulfillment of shared ambitions.

This approach has not stopped at just local revitalization. Several initiatives from our history were very similar to today's concept of CSR. For example, in 1907 we created an elementary school to provide formal education to the children of employees. We also donated telephone poles and wires linking Osaka to Amagasaki (said to be the reason the town of Amagasaki in Hyogo prefecture has the same 06 area code as Osaka).

Fostering Compliance Awareness

This year marks Unitika's 124th year since its founding. The success of our long, century-plus history has come from providing products and services through a our philosophy of "Contributing to society by connecting people's lives and technology". It has also come from the earnest corporate activities of employees working to implement our approach of mutual prosperity through

harmony with stakeholders, as well as the gift of trust bestowed on us by those stakeholders.

While corporate compliance problems have often been the subject of scrutiny in frequent years, the Unitika Group has created and implemented corporate standards that go beyond the requirements of compliance with laws and international rules. The Unitika Charter of Corporate Behavior sets forth the sense of social conscience that myself and each of the other officers and employees act with, while the Unitika Action Standards call for employees to be ever-vigilant in ensuring they act appropriately.

To ensure that we continue to merit the stakeholder trust we have built up over many years, the Group is working in unison to foster greater compliance awareness and to strengthen our corporate governance.

Goals for Shaping the Unitika Group's Identity

In 2012, we created Vision 2020, a document that sets forth our long-term vision for the Group. It sets forth three goals for shaping the Group's identity—to become (1) a company that grows alongside its customers as we realize our mutual dreams, (2) a company of global standing, and (3) a company that satisfies all its stakeholders and in which employees take pride.

We will continue to work actively on self-reform and taking on the challenges of the future while meeting the expectations of all our stakeholders.

I hope that this year's CSR Report will help give you a better understanding of the Group's activities.

Notes on FY 2013 Report

● Release History and Period Covered

We have released the Unitika Environmental Report once a year since 2002. In 2006, we expanded its content to include CSR activities and interactions with stakeholders. This year's report covers the period from April 1 2012 to March 31 2013, but also includes some information relating to activities taking place after April 1 2013.

● Reference Guidelines

This report refers to the Environmental Report Guidelines (2007 edition) issued by the Ministry of the Environment.

● What This Report Covers

This report in principle covers activities by Unitika, Ltd.'s domestic production sites and the Unitika Group companies including those overseas and Environmental Report covers the following range of items.

Unitika Production Sites in Japan

Uji Plant
Okazaki Plant
Sakoshi Plant
Tarui Plant
Toyohashi Plant
Tokiwa Mill
Kaizuka Office
Central R&D Laboratories

Internal Group Companies

Ad'all Co., Ltd.
Nippon Ester Co., Ltd.
Unitika NP Cloth Co., Ltd.
Unitika Environmental Technical Center Co., Ltd.
Unitika Glass Fiber Co., Ltd.
Unitika Plant Engineering Co., Ltd.
Unitika Trading Co., Ltd.
Unitika Textiles Ltd.
Unitika Logistics Co., Ltd.

External Group Companies

I-TEX Co., Ltd.
Osaka Dyeing Co., Ltd.
Diabond Chemical Co., Ltd.
Terabo Co., Ltd.
Union Co., Ltd.
Unitika Sparklite., Ltd.
Unitika Spinning Co., Ltd.
Unitika Berkshire Co., Ltd.
Unitika Realty Co., Ltd.

● Release Date and Format

This report will be made available for viewing on the Unitika website in October 2013. Since the inception of this report in 2002, Unitika has sought to minimize environmental impact by releasing it only on the website and not in paper format. The next report is scheduled for release in October 2014.

● Terminology used in this report

- CSR : Corporate Social Responsibility.
- Stakeholders : Customers, shareholders, suppliers, society, local communities, employees, and other individuals and organizations that have vested interests in a company.
- Corporate governance : Decision-making methods designed for the sound operation of a company
- Compliance : The observance of laws and corporate ethics.

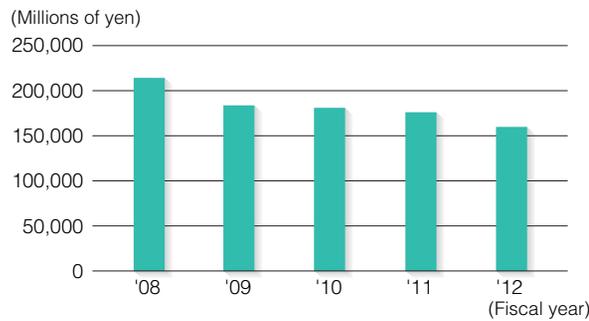


Company Overview

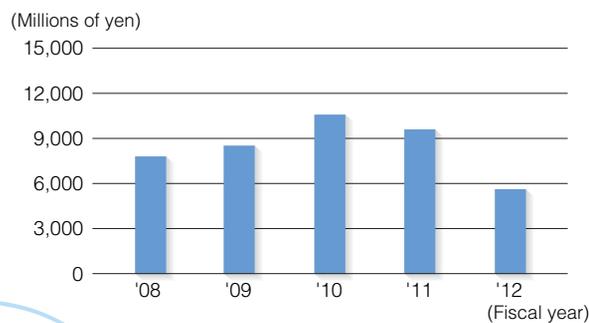
- **Name:** Unitika Ltd.
- **Founded:** June 19, 1889
- **Capital:** 26.2 billion yen (as at March 31, 2013)
- **Osaka Headquarters**
Osaka Center Bldg., 4-1-3 Kyutaro-machi,
Chuo-ku, Osaka, 541-8566 Japan
- **Tokyo Head Office**
JP Bldg., 3-4-4 Nihonbashi-Muromachi, Chuo-ku,
Tokyo, 103-8321 Japan
- **Central Research Laboratory**
23 Uji-Kozakura, Uji-shi, Kyoto, 611-0021 Japan

- **Number of employees (consolidated):** 4,534 (as at March 31, 2013)
- **Sales (consolidated):** 160.1 billion yen (FY 2012)
- **Main business areas (consolidated):** Polymer business area: Films, resins, spunbond, biodegradable materials
Advanced materials business area: Glass fiber/woven materials, glass beads, activated carbon fiber, metal fibers
Fiber business area: Yarns/staple fibers/woven and knitted fabrics, secondary products
Other: Medical business, functional foods, plant design/construction/maintenance, apartment buildings, other

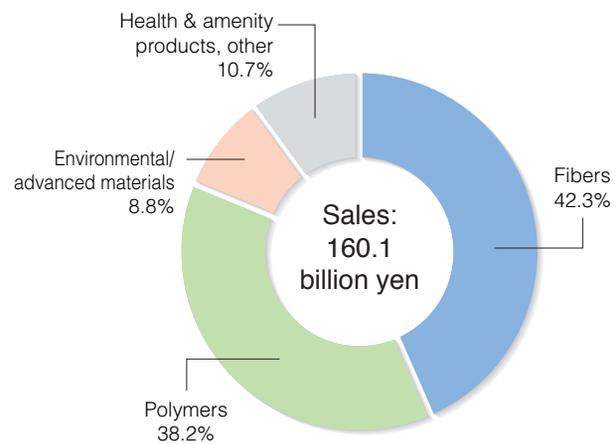
■ Sales(Consolidated)



■ Operating Profit (Consolidated)



■ Sales Share of Each Business Unit (FY 2012, Consolidated)



TOPICS

Exhibit at Eco Products 2012

The Unitika Group exhibited at Eco Products 2012, a trade fair held at the Tokyo Big Sight exhibition center from December 13 (Thursday) to 15 (Friday). Illustrating the theme For the Earth: Building the Planet's Future Life Together, the Unitika Group publicized its environmental initiatives by exhibiting products in five categories: biomass materials, recycled materials, eco-friendly materials, energy-saving materials and effective use of resources.



Our Philosophy

"Contributing to society by connecting people's lives and technology"

Our philosophy is "contributing to society by connecting people's lives and technology". We have created Vision 2020, a document that sets forth our long-term vision for the Group. It sets forth three goals for shaping the Group's identity—to become a company that grows alongside its customers as we realize our mutual dreams, a company of global standing, and a company that satisfies all its stakeholders and in which employees take pride.

The Unitika Group Slogan
UNITIKA
We Realize It!

There is an unimaginable number of people in the world. There is an unimaginable number of dreams and hopes.

The Unitika Group aims to unite all of these with one desire. One desire to improve the lifestyle of persons, living together in harmony within the global environment.

Unitika has the creative power to bring about this way of thinking. We also possess the technology and energy to turn these possibilities into realities. We have taken the time to unite all the companies involved in our various businesses, ensuring we are operating at full capacity through unification of our capabilities across numerous fields.

Unitika consistently strives to work together toward this goal.

The possibility of improving persons' lifestyle - We Realize It! -

We are the Unitika Group.

Corporate Governance

● Basic Policy

Through our management philosophy of contributing to society by connecting people's lives and technology, we at the Unitika Group aim to be a company with a clear social presence. We have worked to achieve stakeholder-focused management by pursuing governance strategies that include the enhancement of legal compliance and risk management and the timely and appropriate disclosure of information, and the implementation of rapid decision making.

Corporate governance will continue to be a key component of our corporate management activities.

● Implementation

Unitika uses a management system that separates and specifies two sets of functions: (1) operational decision-making/supervisory (governance) functions and (2) business execution (management) functions. The Board of Directors is used as the organization specializing in governance functions, while policies and issues related to overall Group management are discussed by the Business Promotion Council (which consults with the Board of Directors on particularly important items). The Business Execution Council functions as the decision-making organization for items related to business administration and management. The Company's internal control system is led by a compliance committee headed by the President, and a CSR Office. This system can provide timely responses by setting up methods of gathering/auditing information and whistleblower contact points for information to be directed inside or outside the Company.

Furthermore, we work to educate our staff regarding legal compliance by conducting suitable training for new employees and newly promoted employees and distributing Unitika Charter of Corporate Behavior and the Unitika Action Standards to all group employees in addition to other initiatives.

Internal Control

Unitika created an Internal Control Promotion Office in 2007, which has been working on creating internal controls for financial reporting. In 2008, the Company integrated the departments related to internal controls to create a CSR Office that has been working on promoting internal controls.

Basic Policy

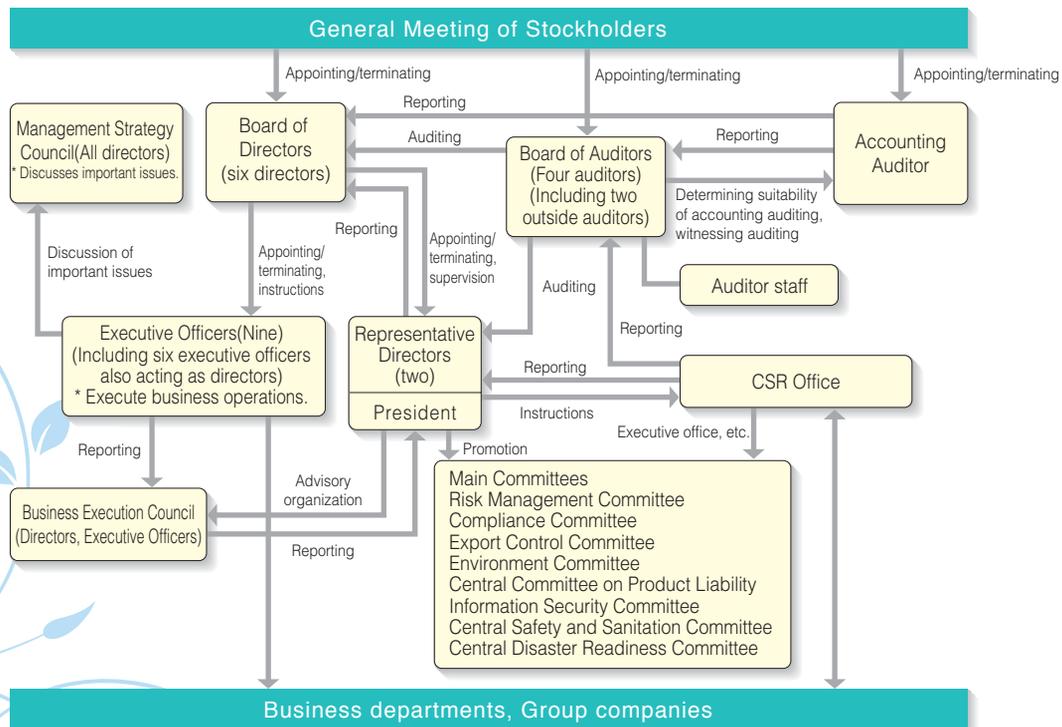
Unitika's Basic Policy for Internal Control consists of the following nine items

- Unitika's Basic Policy for Internal Control (Item Headings) ■**
1. Organization to ensure that the execution of job duties by directors and employees complies with all applicable legislation and the Articles of Incorporation
 2. Items pertaining to saving/managing information on directors' execution of job duties
 3. Regulations on loss hazard management; other organizational elements
 4. Organization to ensure that execution of directors' job duties is performed efficiently
 5. Organization to ensure suitability of operations done by corporate groups
 6. Organization to secure the reliability of financial reports.
 7. When auditors ask for appointment of employees to act as assistants
Items pertaining to organization for those employees, and to their independence from directors
 8. Organization used for directors and employees to report to auditors; organization for reporting to other auditors
 9. Other organizational elements to ensure that auditing by auditors is performed effectively

Organization

The diagram below shows the organization used for corporate governance, and to ensure fair corporate activities. The basic elements correspond to Unitika's Basic Policy for Internal Control (outlined above). This organization is used to strictly enforce internal control-compliance, information saving/management, risk hedging, export control, increasing the execution efficiency of director job duties, and ensuring the suitability of operations.

Organization



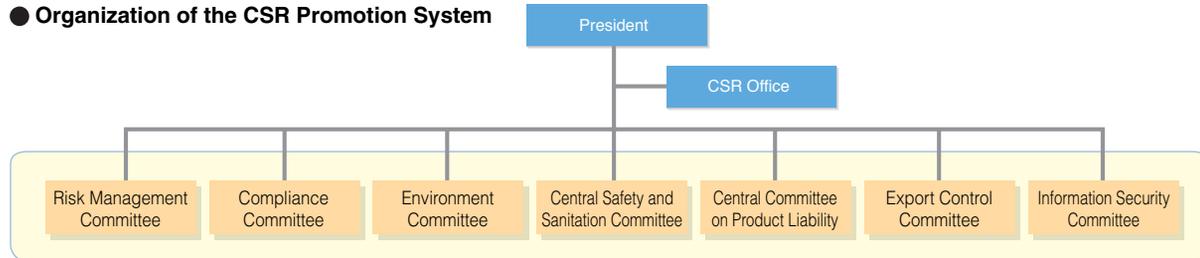
CSR Promotion System

Unitika's CSR Office is an organization created to promote and oversee all CSR activity areas, such as environmental awareness, safety measures, compliance and risk management.

We have established a management system consisting of various committees and business divisions that support the CSR Office in promoting CSR initiatives.

Priority initiatives include those aimed at ensuring (1) the promotion of compliance, (2) environment, health, and safety (EHS) management, (3) product safety, (4) export control, and (5) information security management.

● Organization of the CSR Promotion System



Environment, Health, and Safety (EHS) Management

Unitika's Environment Committee and Central Safety and Sanitation Committee are organizations created to oversee environmental management, and health and safety management. The Environment Committee's main functions are examining basic plans on environmentally aware business and verifying their progress, discussing reports of results of environmental audits of production sites and Group companies done by the committee secretary, and discussing other major items related to the environment. The Central Safety and Sanitation Committee discusses measures to prevent work-related accidents and other accidents/disasters, and discusses other major items related to health and safety. These two committees are higher-level organizations that oversee the Environmental Safety Groups of individual Unitika production sites and Group companies. They play an important role in specifying and compiling Group policies when lower-level organizations propose and implement measures reflecting their own unique circumstances.

Export Control

Driven by a renewed awareness of the increasing importance being given globally to export control, we have revamped the Export Control Regulations, and strengthened our export control system. We have appointed an export control manager and three other managers in business offices, and carry out daily double checks in export operations. Our system is designed so that if a concern arises with a shipment for export, the export control committee head (who is an officer of the Company) determines the final approval. A dedicated internal site has been created to enable the latest information on in-house systems or amendments to statutes to be checked at any time, and measures have been created to enable rapid information sharing. To provide large numbers of employees with correct information on trade control, we hold briefings and periodic in-house training for newly promoted employees (177 in FY 2012), and are planning to add export control education to our lineup of compliance education.

Information Security Management

Unitika's Basic Policy on Information Security was created as a guideline on maintaining the confidentiality of information assets and preventing their unauthorized use. It contains the Information Security Declaration, which sets forth a management/operation system centered around the Information Security Committee, and outlines approaches to ensuring the protection and effective use of personal information received from users and information obtained in the course of doing business.

■ Unitika Information Security Declaration (Preamble Omitted) ■

1. We will take steps to ensure the security of information as set forth by our Information Security Policy.
2. We will create an information security management organization, and implement it in a systematic manner.
3. We will educate and train our directors and all employees on our Information Security Policy, working to prevent information security accidents.
4. We will work on improving our information security measures on an ongoing basis.
5. We will comply with all personal information protection laws and all relevant statutes and standards.

Information Security Policy refers to the documentation set forth and managed by the information Security Declaration, Basic Policy on Information Security, Standards for Information Security Measures and Information Security Implementation Procedures.

Compliance Promotion

In 1998, Unitika instituted the Unitika Action Charter. Moreover, as a company that contributes to people's lifestyles and the environment while carefully ensuring legal compliance, Unitika distributes a booklet of these standards to all Unitika Group directors and employees, so that they can put them into action.

In FY 2011, additions were made to the standards in compliance with international rules prohibiting inhumane and unfair labor practices—forced labor, child labor and human trafficking.

We work to ensure that all employees are aware of compliance and that it is firmly established by making it a component of promotion training for all staff, including new employees.



A compliance training session

Unitika Charter of Corporate Behavior

The Unitika Charter of corporate behavior is our basic policy on how best to fulfill our mission as a public-spirited corporation. It applies to all directors and employees of Unitika and Unitika Group companies.

The Unitika Charter of Corporate Behavior is a set of guidelines on how to act for the public good by complying with laws and international standards and guidelines.

1. UNITIKA, by the development and provision of socially beneficial goods and services in a safe and responsible manner, shall strive to earn the confidence of their consumers and customers.
2. UNITIKA shall promote fair, transparent, free competition and sound trade. They shall also ensure that their relationships and contacts with government agencies and political bodies are of a sound and proper nature.
3. UNITIKA shall engage in communication not only with shareholders but also with members of society at large, including active and fair disclosure of corporate information.
4. UNITIKA shall strive to respect diversity, individuality and differences of their employees, to promote safe and comfortable workplaces, and to ensure the mental and physical well-being of their employees.
5. UNITIKA shall respect the culture and customs of other nations and strive to manage their overseas activities in such a way as to promote and contribute to the development of local communities.
6. UNITIKA shall reject all contacts with organizations involved in activities in violation of the law or accepted standards of responsible social behavior.
7. As a "good corporate citizen," UNITIKA shall respect fundamental human rights and actively engage in philanthropic activities, and other activities of social benefit.

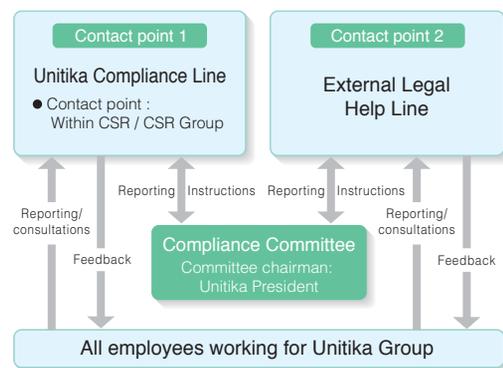
Whistleblower Contact Points

We have put into effect a set of 'whistleblower protection' (internal reporting) regulations, and have set up two reporting contact points (one inside, one outside the Company) to enable employees to immediately report any malfeasance or illegal activities they encounter. Such exhaustive measures are led by the Compliance Committee (chaired by the President), and ensure strict compliance within the Company. The regulations include provisions to protect whistleblower privacy and prohibit prejudicial treatment of them for making a report.



A discussion between the Committee and an outside attorney help line

Unitika's Whistleblower Contact Points



Establishment of Harassment Consultation Services

To aid in early detection and resolution of the problems of workplace sexual harassment and power harassment, Unitika's production sites and Group companies have established consultation services for assisting with these problems.



A harassment training session

Unitika Purchasing Policy

● Purchasing Policy

Unitika purchasing departments will engage in transparent, fair procurement practices that meet personal and community standards. They will uphold the Company's duty to engage in responsible procurement activities, placing emphasis on CSR activities.

1. Legal Compliance

When executing purchasing activities, the Company will comply with laws and community standards, engaging in transparent, fair procurement activities and aiming to be a good corporate citizen.

2. Harmony With Environment

When procuring products or services, the Company will value environmental awareness and the preservation of safety, endeavoring to purchase products and raw materials of low environmental impact.

3. Respect for Human Rights; Improving Working Environments

When engaging in purchasing activities, the Company will respect human rights and ensure that all forms of prejudice are eliminated when work is executed. The Company will make efforts to ensure health and safety, and to improve work environments.

4. Partners (CSR Aspects)

The Company will aim to create better partnerships, and ask partners to:

- A. Comply with legal and community standards
- B. Respect human rights; value efforts to improve working environments
- C. Work on activities to preserve the environment and to ensure safety
- D. Endeavor to ensure appropriate quality/prices and reliably on-time delivery, and to maintain and improve products and services

2013 Unitika Mascot Girl

*Hi! My name's Rina Matsuda.
I'm the new Unitika's Mascot Girl for 2013.
I'm going to be spreading the word to as many
people as possible about all the great things
Unitika's doing. So check out my smile—
I'm the happy face of Unitika! See you!*



Name: Rina Matsuda
Date of birth: May 2, 1999
Home town: Fukuoka
Skills: Playing piano, swimming, sprinting, making faces
Hobbies: Listening to music, writing letters
Dream job: To become a star able to amaze the world

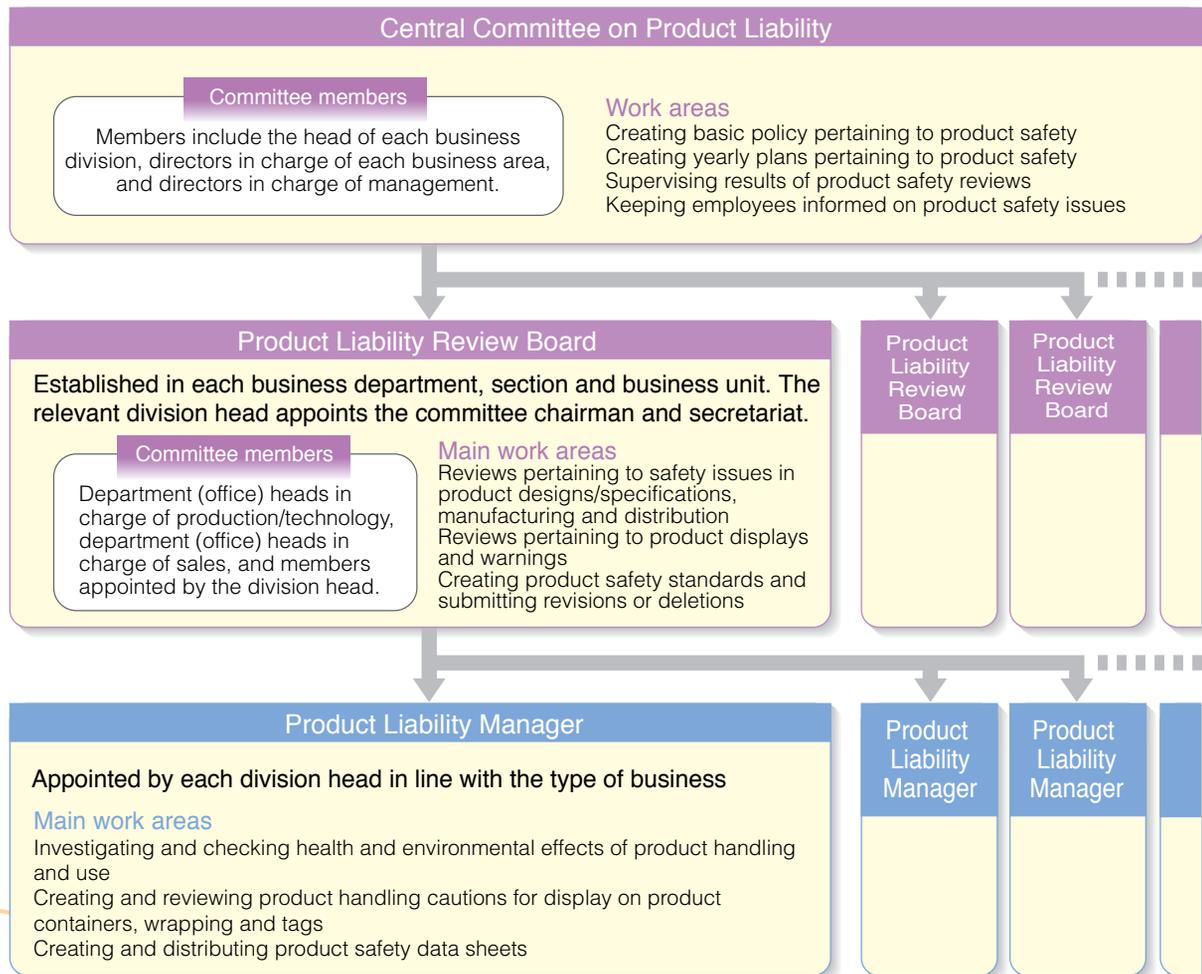


Relationships with Clients

Through our product liability and quality assurance efforts, Unitika strives constantly to improve product safety and quality of our products maintaining customer satisfaction as our first priority.

Ensuring Product Safety

Unitika has established product safety management regulations designed to ensure that we always offer safe products to our customers. Unitika's product safety management regulations contain detailed provisions on areas such as basic policy, responsibility areas, implementation systems, and bylaws on the implementation and application of manual procedures. Unitika and Unitika Group companies work to ensure that product manufacturing and sales are carried out safely, in compliance with these regulations. The chart below details promotional system, headed by the Central Committee on Product Liability, for ensuring product safety.



Product Safety Record for Fiscal 2012

No product liability-related incidences occurred.

*Information on the claims which may bring about an accident is shared by the Central Committee on Product Liability and such information is used to prevent from repeated claims.

Quality Assurance Activities

In order to satisfy customer's demands on our products, the Unitika Group is pursuing quality management system certification. We are constantly improving our quality assurance activities based on ISO9001 standards for quality management systems.



Relationships with Shareholders & Investors

Seeking to pursue a stakeholder-oriented business style, the Unitika Group strives to create several opportunities to enable timely information disclosure to shareholders and potential investors. The IR/Public Relation Group implements activities to ensure these opportunities run smoothly, and works to augment dialogs with shareholders and potential investors.

IR Activities

■ Ordinary General Stockholder Meetings

Held every year in late June. Outlines the latest business conditions and gives shareholders an opportunity to dialog, seeking to provide a better understanding of the Company's current management environment and policies.

■ Announcements of Financial Statements & Explanatory Sessions

Unitika conducts a variety of financial data disclosure activities, including twice-yearly second quarter and full financial year accounting statements for the press, both of which are followed a week or so later by explanatory session geared toward institutional investors and analysts.

■ Institutional Investor Visits

Unitika representatives make visits to institutional investors and analysts in order to provide more specific information as needed.

■ Publications

- Financial Flashes (4 times annually, in May, August, November, and February)
- Stockholder Reports (2 times annually, at second quarter and full year closing)
- Corporate Guides

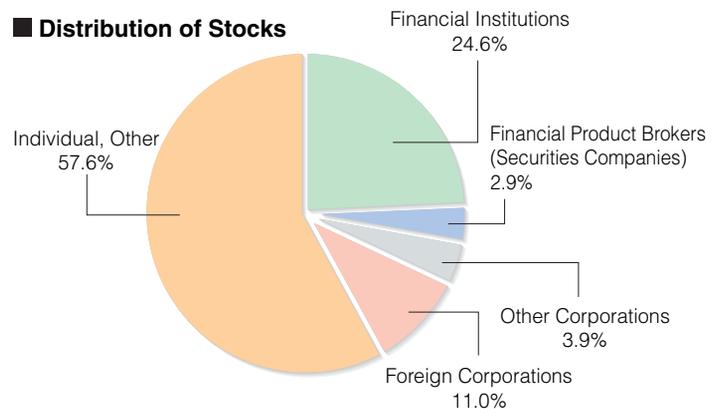
■ Website Development

Unitika's website contains the Investor Relations page for shareholders and potential investors that discloses IR information and press releases on products and services. There is also an archive of past short-form financial statements, IR briefings materials and securities reports.

Share Status (as of 31 March, 2013)

- **Total Number of Shares Issued:** 577,523,433
- **Number of Shareholders:** 58,530
- **Number of Unit Shareholders:** 50,279

■ Distribution of Stocks



TOPICS

Fishing Show Osaka 2013

Unitika exhibited at the Fishing Show Osaka 2013 trade fair held from February 1 (Friday) to 3 (Sunday) at the Intex Osaka exhibition center. This year's theme of Get Force publicized how Unitika's fishing products lineup brings people food from the sea through the power and know-how of technology. Unitika's expert staff held seminars attended by sellout crowds of visitors. A later seminar featured an appearance by Unitika's Mascot Girl Rina Matsuda, who enthralled the audience with the story of her recent introduction to squid lure fishing.



Contributing to the Community and the Environment

The Unitika Group is seeking to protect the environment, preserve biodiversity and ensure solid educational opportunities for children by disseminating information on a wide variety of topics ranging from local beautification drives and disaster readiness programs, to woodland conservation and educational aid in developing countries.

Community-focused Initiatives

● ECO Kyoto

Eco Kyoto 21 is a system run by Kyoto prefecture to certify and register production sites that play a leading role in environmental preservation or local recycling efforts. Unitika's Uji Plant is participating in the system, and in December 2004, was certified and registered in the system's Ecostyle category for production sites and organizations engaging in highly original environmental awareness activities.



● Participation in Local Beautification Activities

As part of their efforts to give back to the community, Unitika production sites actively take part in environmental beautification drives to clean up their surroundings. At the Okazaki Plant, about 80 volunteers clean the area around the plant on the second Thursday of every month. About 150 volunteers also came out to clean the area around the plant on May 26 (Saturday). In October, about 100 volunteers from the plant joined with local volunteers to clean the Yahagi River as part of a river and sea cleanup drive. The Uji Plant conducts its Clean Uji beautification and cleanup activities in the area around the plant three times per year. A total of 1,038 volunteers turned out for the FY 2012 cleanups, held on June 28 (Thursday), September 6 (Thursday) and March 1 (Friday). In addition to its regular beautification drives, the Unitika Sakoshi Plant also took part in the Aiko Cleanup Campaign, with 35 volunteers from the plant cleaning the surrounding area on May 30 (Wednesday). Plant members also turned out for a town center cleanup campaign organized by members of a local association of commerce and industry. Another of the many Unitika plants active in cleanup efforts is the Tarui Plant, from which 21 volunteers took part in an Aikawa Waterside Park cleanup drive in the area around the plant.



Volunteers from the Okazaki Plant taking part in a local cleanup drive



The Uji Plant's Clean Uji activities



The Sakoshi Plant's beautification efforts included taking part in the Aiko Cleanup Campaign



The Tarui Plant's cleanup efforts in Aikawa Waterside Park

● Communicating with Local Authorities during Disasters

The Okazaki Plant has made agreements with local governments and fire departments to open as a refuge for local residents during floods, and to provide the fire-prevention equipment it has on hand (such as chemical fire extinguishing agents and oil mats) during disasters such as earthquakes.

Preserving the Environment and Biodiversity

● Participation in Biodiversity Declaration

Unitika has endorsed the Declaration of Biodiversity released by trade organization Keidanren in 2009, and is partnering with it in promoting the declaration. The declaration contains seven principles covering areas such as harmonizing business activities with natural cycles, and promoting business oriented to these cycles. Unitika's business activities are designed with an awareness of biodiversity.

● Unitika no Mori ('Unitika Wood') Project

To mark its 30th year, Unitika's labor union (Unitika Union) started a project called Midori no Plan ('Green Plan') in 2003. Designed to give back to the community and protect the environment, the project has included planting Japanese chestnut oaks, konara oaks and Japanese cypresses in a 2 hectare area of mountain forest that has been named Unitika no Mori (located in Hidakagawa-cho, Wakayama prefecture). Several times a year, Unitika employees visit the site to maintain the forest by clearing underbrush and pruning branches. These activities have been officially recognized by Wakayama prefecture as 'an effort contributing to CO₂ absorption through forestation'. It is expected to result in about 800 metric tons of carbon dioxide absorption over next 100 years. In August 2012, 25 Unitika employees took part in clearing the underbrush in the area to improve tree growth.



Volunteer Activities

Unitika Union created a volunteer foundation in 1992, and engages in support activities in Japan and overseas. Its domestic activities include environmental preservation efforts, support activities for welfare facilities, training seminars and support activities for natural disasters. Overseas activities include international support activities such as sending volunteers to work camps for international exchanges. It has also set up a volunteer leave of absence system enabling Unitika employees to take a fixed amount of time off from work to take part in the community service programs of nonprofit organization Japan Overseas Cooperation Volunteers (JOCV). In September 2012, a male employee returned to work after using the system to spend two years in the African nation of Malawi to volunteer as a science and math instructor. So far three employees have returned to work after using the system to do volunteer work.



A Unitika employee volunteering for JOCV as a math and science instructor

Disaster Prevention & Readiness Efforts

To prepare for major disasters like the earthquake and tsunami that devastated Tohoku in March 2011, disaster readiness measures are crucial both to fulfill the basic mission of protecting the lives of employees as well as to uphold the responsibility to stakeholders of continuing business activities. In compliance with Japan's Act for Promotion of Renovation for Earthquake-Resistant Structures, the Unitika Group inspects structures and facilities of production sites, works to create self-supporting emergency energy supply systems, and provides for home generation facilities while working on production site energy conversion.

● Disaster Readiness Training

The Unitika Group works on creating systems to prevent production accidents and accidents damaging surrounding areas, while actively promoting training to prepare for accidents and natural disasters. To make internal standards for managing safety at production facilities, Unitika has established a set of "pre-evaluation policies" on safety sanitation and environmental effects at new facilities. As a disaster readiness measure when creating or renovating facilities, a total of two rigorous inspections (during design and upon completion) are carried out in compliance with these standards.

The Okazaki Plant held a plant-wide disaster readiness training exercise on November 14 2012, with a general fire drill and a general earthquake drill practicing responses to an actual earthquake. The earthquake drill involved training to deal with leaks, transporting the injured, closing off spaces, and carrying out important items. The fire drill was done in collaboration with Nippon Ester's Manufacturing Section No. 3 and the site's fire truck squad.



Fire-fighting training (Okazaki Plant)



Training to extinguish small fires (Uji Plant)

Other Unitika production sites also carry out training in line with fire prevention campaigns held in spring and fall. At the Uji Plant, individual departments train in areas such as reporting, communicating, seeking refuge, aiding victims and extinguishing small fires. A total of 890 employees took part in FY 2012. Union Co. has prepared for fires caused by major earthquakes by providing training for steps ranging from setting up a disaster response center to fire-fighting, and providing LNG emergency shutoff training. The Tarui Plant has provided training in the use of fire truck fire hoses and accessing water from fire hydrants. The Sakoshi Plant has provided fire-fighting training for individual departments.



Fire hose training (Union Co.)



Fire truck fire hose training (hose connection) (Tarui Plant)



Fire truck handling training (fire hose use) (Tarui Plant)

Concern for Our Employees

Unitika's personnel system is designed to encourage employee self-actualization. We provide equal employment and work opportunities, and make every effort to create accommodating workplace environments.

Personnel System

Unitika's personnel system is designed to encourage employees to develop their careers and improve their abilities. It offers several different educational programs to enable employees to work on their personal growth with a high degree of motivation and an ambitious mindset. These programs are offered systematically and continuously to enable organizational growth and boost corporate competitiveness.

● Personnel Rotation System

Unitika's personnel rotation system is designed to enable systematic education of the human resources needed for the ongoing running of organizations in accordance with the job level of each individual. It is designed to enable the career development of each employee, to create synergy among organizations and to lead to better business opportunities and corporate performance. Employees self-report the positions they want to be posted to, which are considered along with the needs of the Company, providing the best possible understanding of expected employee roles and ability development goals, and enabling more effective operations.

● Evaluation System

Unitika's evaluation system is designed to provide a more accurate understanding of the roles employees expect to occupy, and to provide more impartial evaluations of the individuals producing the results needed to fill those roles. Employees are given yearly performance evaluations that rate them based on their competency, ability, role improvement, attainment of results, and job execution processes. They are also given twice-yearly performance evaluations in accordance with the Company's target management system. These evaluations form the core of an evaluation system that helps ability development and education of each employee, is linked to pay raises, promotions and bonuses, and enables reliable feedback through discussions of evaluation results with superiors.

Human Resources Education

Driven by the awareness that raising the overall minimum ability level of employees will strengthen our organizational core competency, Unitika has recently created an education and training system. Positioning on-the-job training tailored to each employee's career path as the core of human resources training, the system enables more effective follow-up training for young employees and more effective education and support for supervisors. The system's off-the-job training programs provide augmented educational opportunities for each job level, including a greater number of programs than before aimed at improving management abilities. Moreover, a greater range of function-specific programs will be offered to strengthen functions for specific job types in the areas of sales, technology development and manufacturing. To promote overseas business, training programs for global human resources will be provided systematically and continually, fostering a global mindset and improving skills.

○ Education/Training System

- Ability training period (first 3 years at Unitika) and follow-up training, on-the-job training for reinforcement
- Level-specific education (such as for high-level managers, new managers, supervisors and other newly promoted employees)
- Selective education (such as for core leaders and young leaders)
- Function-specific education (for sales positions, technology development positions and manufacturing positions)
- Overseas study system for technical positions
- Self-improvement support (such as help gaining qualifications and correspondence courses)

○ Training Programs for Global Human Resources

- Placement in overseas-related positions or overseas bases through personnel rotation
- Overseas trainee system
- Assistance for taking foreign language lessons
- Overseas-related job training (global courses)
- TOEIC testing recommendations, other

Employee Mental Health

Unitika actively pursues measures to ensure the mental well-being of employees based on the Guidelines on the Maintenance and Enhancement of Employee Mental Health issued by the Ministry of Health, Labour and Welfare. All Unitika employees undergo mental health training when they are promoted to a management position. We encourage managers to be aware of their managerial role and to take care of their own mental health as well as the mental health of employees in their charge. Unitika introduced return-to-work support guidelines for employees who have taken extended leave due to mental illness. We manage and promote employee health by supporting all employees at every stage from preventing illness to facilitating their return to work.

Equal Opportunity

● Women Employees

We employ a large number of female employees and have no gender-biased employment or promotion policies.

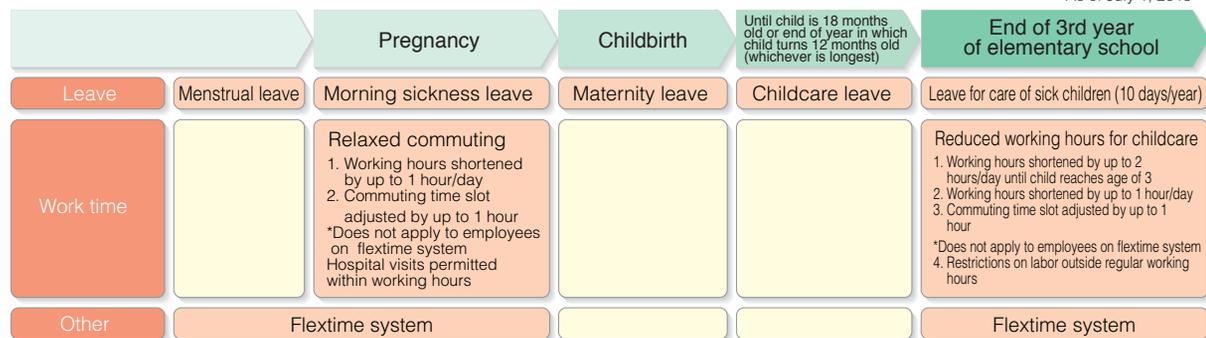
● Reemployment System

Unitika has a senior employee system that enables employees to continue in the same job after reaching the age of 60. We welcome employees who want to continue working.

In addition, we are planning to enact systems and to improve existing ones, with the connection between pensions and employment always kept in mind.

● Support System for Work and Childcare

As of July 1, 2013



● Achieving a Work/Life Balance

In the interest of achieving an ideal balance between work and home life, and also to address Japan's aging society issues, Unitika fosters a corporate environment that allows employees to take leave for both child-raising and elder care, and in fact, Unitika offers leave durations for these, and also for care for sick children, that are longer than those stipulated by law. Also, based on Japan's "Next-Generation Child-Raising Support Measures Promotion Law," the company is also involved in promoting male participation in child-care, with child-care leave available to both male and female employees.

	Employees taking childcare leave	Employees taking leave to care for elderly relatives
2008	18(1)	4
2009	16(0)	1
2010	17(0)	1
2011	19(2)	1
2012	14(4)	1

*Numbers in parentheses indicate number of male employees who took childcare leave.

● Employing People with Disabilities

Unitika not only employs enough personnel to meet the legally mandated percentage of employees with disabilities (2.0%) but also cooperates with local employment agencies and welfare facilities in activities to provide self-reliance support to people with disabilities.

Percentage of Unitika employees with disabilities

2.79% (as of the end of March 2013)

Promoting Awareness of Human Rights

● Raising Human Rights Awareness

Unitika engages in Groupwide human rights education. We have documented the importance of respect for human rights in the Unitika Charter of Corporate Behavior provided to all employees, and have created an organization for furthering human rights education. As a member of the Corporate Report Association of Human Rights Issue, Unitika works on human rights issues in a variety of ways, such as by gathering human rights educational information. In line with the enactment of Japan's Equal Employment Opportunity Act, the Company has created help centers in each workplace for provide support for issues such as sexual harassment and power harassment, raising employee consciousness and awareness of these problems.

● Eliminating Unfair Labor Practices

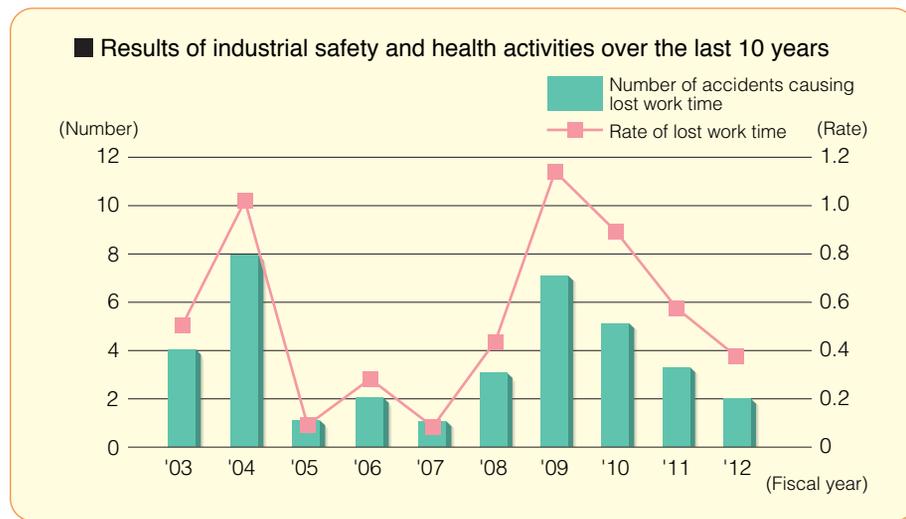
Unitika Group companies and overseas affiliates have made declarations of their refusal to take part in any form of forced labor or child labor in violation of international agreements such as the International Covenants on Human Rights or the Convention on the Rights of the Child. The Unitika Action Standards document the Company's refusal to permit these unfair labor practices or human trafficking for the purpose of such practices.

● Fair Recruitment Practices

Unitika has created the Unitika Employment Interview Manual based on the spirit of the employment selection guidelines issued by The Ministry of Health, Labour, and Welfare. We promote fair recruitment practices by distributing the manual at meetings and training seminars for interviewers and those involved in the selection process, and ensuring that all concerned are familiar with its contents.

Safety & Health Activities

The Unitika Group engages in health and safety management activities designed to completely eliminate accidents resulting in lost work time. They include original initiatives created by individual production sites and Group companies under the direction of the Unitika Central Safety and Sanitation Committee. The Committee specifies a new set of key policies every three years, and creates health and safety guidelines for use in promoting activities. Activities are now being implemented under the 15th set of guidelines (put into effect in 2011). Production sites and Group companies take an active approach to implementing activities, using the guidelines to create annual activity plans at the start of every fiscal year. The culmination of these activities is the Unitika Health and Safety Conference, a once-yearly opportunity for Unitika employees to gather and gain inspiration by sharing activity reports, recognition for outstanding achievements, and speeches.



Asbestos Removal

In 2005, the Unitika Group established the Asbestos Action Committee, a Groupwide body that promotes asbestos-related measures. Exposed beams and posts containing friable asbestos have already been removed, sealed off or enclosed. Friable and non-friable asbestos that has been sealed off or enclosed is being treated as needed, sometimes in conjunction with periodic repair work.

To verify worker health, we have provided asbestos-related health checkups to all current and former employees requesting it who have handled asbestos in the past. As at March 2013, our past and current employees included six certified industrial accident victims (of whom five have died) and three victims certified under the Law Concerning the Relief of Health Damage Due to Asbestos (of whom three have died). No health problems have been reported from residents of areas surrounding production sites or Group companies.

Number of certified industrial accident victims: 6 (5)*
Number of victims certified under the Law Concerning the Relief of Health Damage Due to Asbestos: 3 (3)*

*Number in parentheses is number of deaths.

Basic Environmental Policy

Unitika named 1993 an Environmental first year, when we enacted the Unitika Global Environment Charter, consisting of our pledge, basic philosophy and action guidelines. Since then, we have complied with this Charter to ensure that our corporate management methods are environmentally aware, working on a range of environmental activities.

● Unitika Global Environment Charter

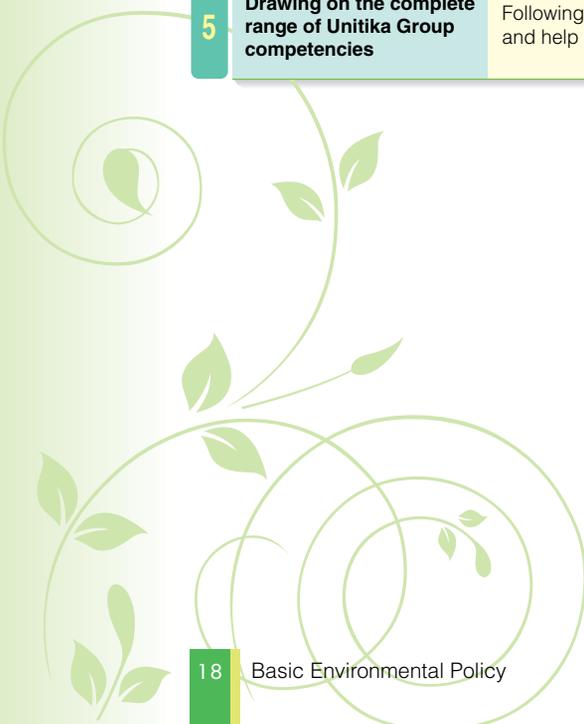
The growth and development of mankind is rapidly altering our planet's air, water and soil, threatening both the global biosphere and our own future, since both must depend on a finite ecosystem. As a corporation with more than a century of business activities contributing to the public good, we are highly aware of the demanding conditions now facing the global environment. The Charter is the declaration of our intention to focus more attention on protecting and helping the environment, making appropriate environmental action the core of our business activities.

● Basic Philosophy

Better living through technology, driven by corporate activities that help humans and nature coexist.

● Action Guidelines

1	Continual awareness of the global environment	The Unitika Group always considers the effects of our corporate activities on the global environment, following a rigorous set of management procedures during product manufacture to prevent harm to it.
2	Contributing through technology development	We aggressively research and develop technologies to protect and help the global environment.
3	Using resources and energy efficiently	We promote efficient use of resources and energy, and recycle limited resources.
4	Carrying out PR and educational activities	We organize a large number of PR activities that provide information on protecting and helping the global environment, and promote a wide range of educational events.
5	Drawing on the complete range of Unitika Group competencies	Following the mandates of the Charter, we draw on our complete range of competencies to protect and help the global environment.



History of Environmental Preservation Activities

● Unitika's Environmental Preservation Activity History

Unitika's work on environmental management has continued uninterrupted for over 30 years, and will continue into the future.

Pollution first became a major issue in Japan in 1973. That year, Unitika created the Environmental Preservation Regulations, making a clear distinction between environmental measures and outward-directed production activities, to enable compliance with regulatory and standards values.

In 1991, we created a new companywide organization called the Environmental Preservation Committee, followed in 1993 by the Unitika Global Environment Charter. That year we began yearly environmental auditing, establishing the basic direction for our environmentally-aware management style that has continued to this day. In 1998, we created the Unitika Charter of Corporate Behavior, a document that sets forth the basic action policy needed to fulfill our Unitika Group mission as a public-spirited corporation. Its first article sets forth our responsibility for environmental and safety awareness.

The Unitika Action Standards created and implemented in April 2001 expanded on the Unitika Action Charter by setting forth specific action standards for Unitika organizations and employees to comply with in the performance of their routine business activities. The Standard of Corporate Behavior represent a clear step toward corporate activities grounded in a mindset of corporate social responsibility (CSR). They cover areas such as the environment, safety, compliance, and coexistence with the public good and stakeholders.

September 1973	Created and implemented Environmental Preservation Regulations.
October 1991	Revised Environmental Preservation Regulations, established Environmental Preservation Committee.
April 1993	Created and implemented Global Environmental Charter.
May 1993	Environmental Preservation Regulations were reborn as Environmental Regulations. Established Environmental Committee, organization which meets annually.
May 1994	Started environmental audits (once per year). (Voluntary audits by each production site and internal audits by headquarters staff.)
July 1996	Created targets for first Medium-Term Environmental Plan (FY 1997 to 1999).
September 1996	Started publishing Kankyo, our in-house newsletter on environmental issues.
October 1997	Started activities aimed at becoming ISO 14001-certified at our major production sites.
January 1998	Created and implemented Unitika Action Charter.
January 1999	Unitika Chemical was awarded ISO 14001 certification (first in Group).
October 2000	Created targets for second Medium-Term Environmental Plan (FY 2000 to 2002).
April 2001	Created Unitika Action Standards.
October 2002	Published Unitika Environmental Report.
October 2002	Created targets for third Medium-Term Environmental Plan (FY 2003 to 2005).
October 2005	Created targets for fourth Medium-Term Environmental Plan (FY 2006 to 2008).
October 2008	Created targets for fifth Medium-Term Environmental Plan (FY 2009 to 2011).
October 2011	Created targets for sixth Medium-Term Environmental Plan (FY 2012 to 2014).

● ISO 14001-Certified Unitika Organizations

Unitika is working on becoming certified under ISO 14001-the international standard for environmentally-aware corporate activities. Since 1999, five production sites (Uji, Okazaki, Sakoshi, Tarui and Tokiwa) and 11 major Group companies have become certified. We have started activities to help our affiliates obtain ISO 14001, and have been conducting environmental audits of each company.

April 1999	Ad'all Co., Ltd.
November 1999	Unitika Sakoshi Plant
January 2001	Unitika Textiles Ltd., Tokiwa Mill
March 2001	Unitika Uji Plant
March 2001	Unitika Uji Plastic Plant
March 2001	Unitika Central R&D Laboratories
March 2001	Unitika Glass Fiber Co., Ltd., Kyoto Plant
March 2001	Unitika Environmental Technical Center Co., Ltd., Kinki Office
October 2001	Unitika Okazaki Plant
October 2001	Unitika Plant Engineering Co., Ltd., Chubu Office, 2nd Business Division
October 2001	Nippon Ester Co., Ltd., Okazaki Plant
October 2001	Unitika Environmental Technical Center Co., Ltd., Chubu Office
December 2001	Unitika Tarui Plant
December 2001	Unitika Plant Engineering Co., Ltd., Tarui Group
December 2003	Unitika Glass Fiber Co., Ltd., Tarui Plant
February 2004	Diabond Chemical Co., Ltd.
September 2004	Terabo Co., Ltd.
June 2008	Union Co., Ltd.

Medium-Term Environmental Plan

The Unitika Group implements systematic improvements having established a Medium-Term Environmental Plan that sets the reduction of industrial waste and the efficient use of resources and energy as priority targets.

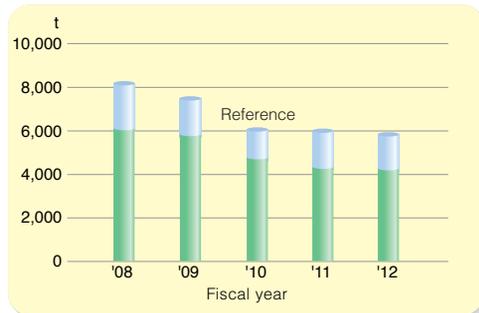
We are currently working to achieve the medium-term targets set forth in our sixth Medium-Term Environmental Plan, which now applies to all external group companies and is based on fiscal 2010 results.

● Sixth Medium-Term Environmental Plan (FY 2012-FY 2014)

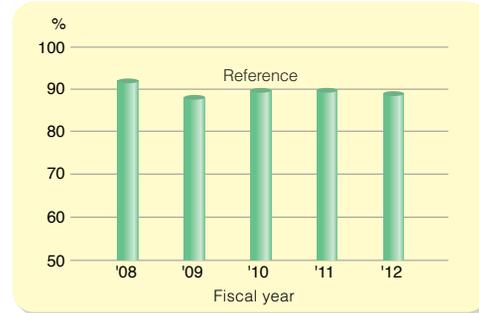
	Priority Issues	Targets	FY2012 Results	Fig. No.
1	Reduction of industrial waste	4% reduction relative to FY 2010 level	Achieved	(1)
2	Improvement of loss recycling rate in production process	1% improvement relative to FY 2010 level	Not achieved	(2)
3	Improvement of energy consumption rate	4% improvement relative to FY 2010 level	Not achieved	(3)
4	Reduction of energy consumption	4% reduction relative to FY 2010 level	Achieved	(4)
5	Reduction of CO ₂ emissions from energy generation	10% reduction relative to FY 2005 level	Achieved	(5)

Note*: Scope of sixth Medium-Term Environmental Plan: Domestic plants, internal group companies, and external group companies

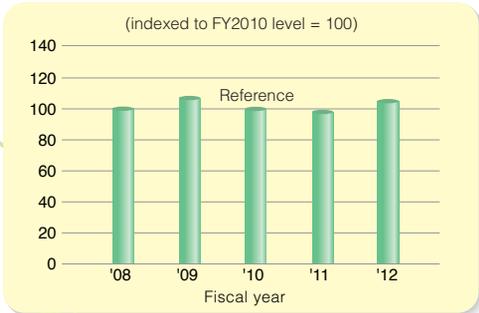
■ Quantity of processed industrial waste products ■ Fig.1



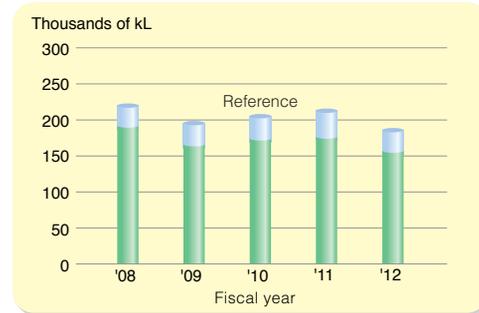
■ Rate of recycling ■ Fig.2



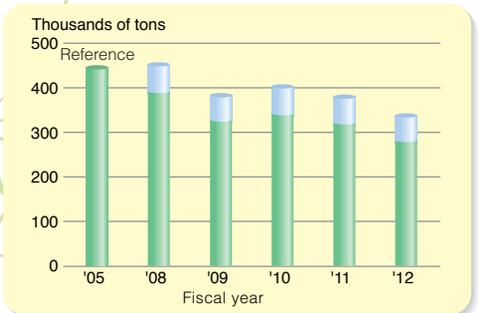
■ Energy consumption rate ■ Fig.3



■ Energy consumption quantity (crude oil equivalent) ■ Fig.4



■ Changes in CO₂ emissions from energy generation ■ Fig.5

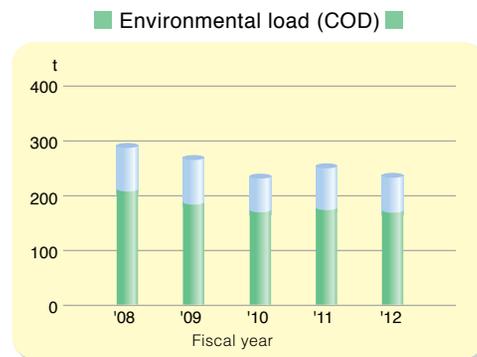
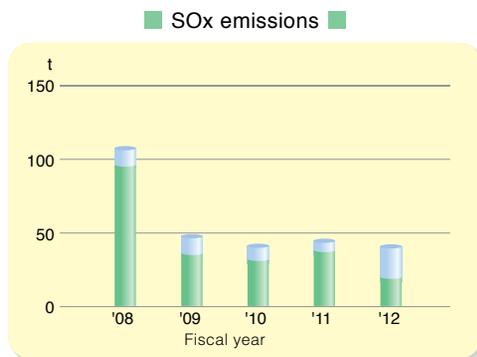
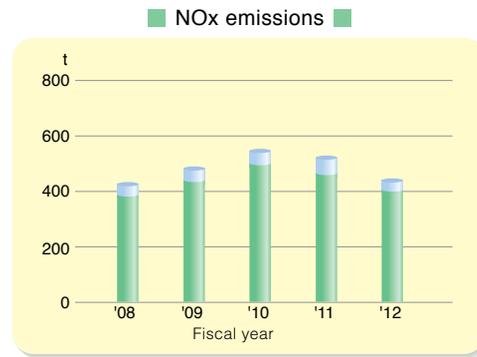
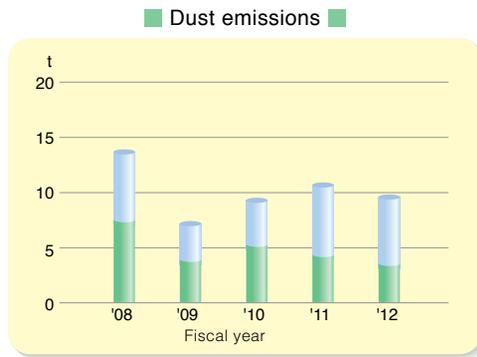


■ Unitika Domestic Plants & Internal Group Companies
■ External Group Companies

Note: Energy consumption rate =
Energy consumption(oil equivalent)(Thousands of KL)
/ output(Thousands of tons)

Reducing Air and Water Pollution

Domestic plants are pursuing measures such as switching from fuel oil to natural gas and the abolition of diesel power generation to reduce emissions of dust, nitrogen oxides (NOx), sulfur oxides (SOx), and carbon dioxide (CO₂). Unitika also works to reduce water pollution through the appropriate management of wastewater treatment facilities.



■ Unitika Domestic Plants & Internal Group Companies
■ External Group Companies
Note: NOx=nitrogen oxides, Sox=sulfur oxides, COD=chemical oxygen demand

TOPICS

National Staff Training

In October, Unitika's Osaka headquarters, and the Uji and Okazaki Plants held a four-day national training seminar for local employees of Unitika overseas affiliates. Held as part of Unitika's human resources training to improve overseas business, and aimed at staff working at overseas local affiliates, the seminar is a regular annual event designed to provide a better understanding of Group business, improve motivation and team spirit, and provide an opportunity for mutual interaction among Group employees from Japan and overseas. This year's seminar was attended by six employees from Tusco (Thailand), Unitika Plastics (Thailand), Emblem Asia (Indonesia) and Unitika Trading (Vietnam).



Handling of Chemical Substances

● Control of PRTR System-Regulated Substances

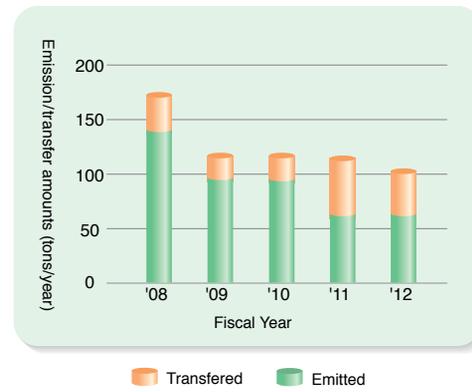
The Unitika Group works to monitor and reduce the use of chemical substances thought to be hazardous to human health as regulated by the Pollutant Release and Transfer Register (PRTR) system.

■ Emission and Transfer Amounts for PRTR System-Regulated Substances in Fiscal 2012 ■

Substance	Emitted			Transferred
	Atmosphere	Water	Total	Total
Acetaldehyde	5	0	5	0
Bisphenol A	0	0	0	4
ε-Caprolactam	15	0	15	0
Dichloropentafluoropropane	4	0	4	0
Dichloromethane(Methylene chloride)	22	0	22	9
Dimethylformamide	0	0	0	1
Terephthalic acid	0	0	0	2
Toluene	12	0	12	9
Boron and its compounds	0	10	10	0
Diphenyl ethers	0	0	0	1
Hydroterphenyls	0	0	0	11
Unitika Domestic Plants & Internal Group Companies Total	46	10	56	27
Unitika External Group Companies Total	12	0	13	10

(annual tons)

■ Emission/Transfer Amounts of Substances Subject to the PRTR System ■



● Response to Amended Chemical Law

In response to amendments to Japan's Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Unitika is working to comply with systems put into effect in April 2011, such as reporting systems for general chemical substances and priority assessment chemical substances. We are disseminating information throughout the Group, working to keep staff informed of the amended information applicable to all process phases, and working to determine the applicable substances.

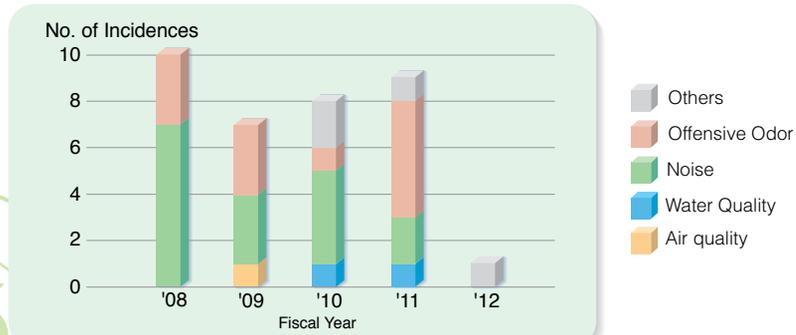
Logistics

Unitika undertakes a variety of efforts to reduce the environmental burden associated with the delivery and emission of raw materials, products, waste, and other materials. These efforts include the implementation of modal shifts (i.e. switching transport from road to rail and/or shipping) and streamlining of delivery systems. In fiscal 2012, as a specified consigner (a Japanese legal designation applied to consigners who ship 30 million tons of freight or more per year,) we reported 82 million tons of freight and 26,000 tons of CO₂ emissions to the government.

Environmental Complaints

When engaging in business activities, the Unitika Group remains continually mindful of their impact on the lives of local residents. In each case, we looked to find both causes and solutions and communicated these to those in the surrounding communities while taking steps to ensure their non-recurrence. In all such situations we will do our utmost to improve so that we may contribute positively to the living environments of the people living around us.

■ Complaints from Surrounding Neighborhoods ■

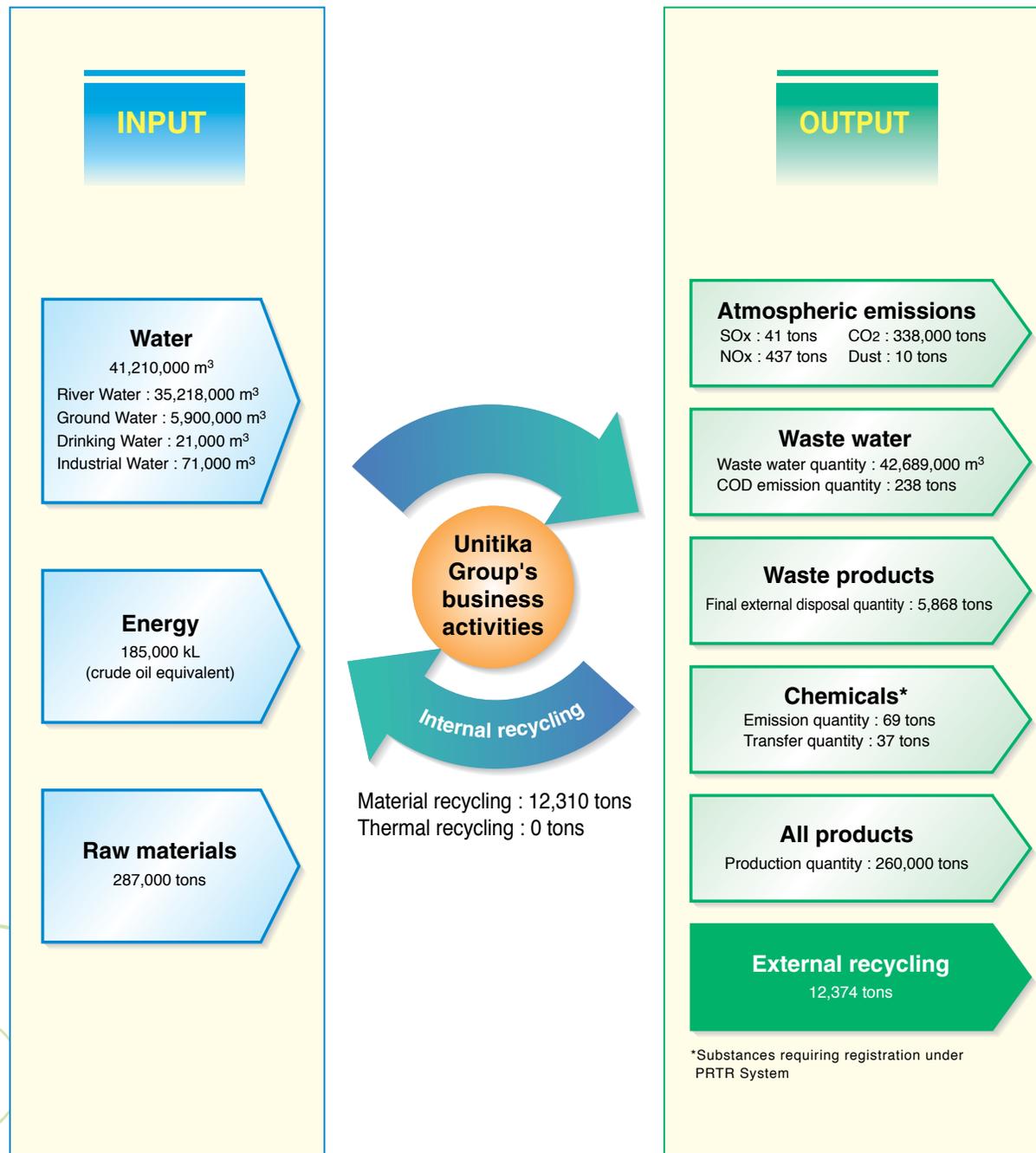


Applicable scope: Domestic plants and external group companies

Overview of Environmental Impact

● Environmental Impact From Business Activities (FY 2012 Figures)

The diagram below shows the Unitika Group's materials flow for FY 2012.



Environmental Accounting

The Unitika Group implements environmental accounting as part of our environment-conscious business activities. In conducting our environmental accounting, we follow the 2005 edition of the environmental accounting guidelines published by the Japanese Ministry of the Environment in February 2005. The Unitika Group will continue to release clear and accurate environmental accounting data.

● Purpose of Environmental Accounting

- To make environmental preservation more efficient by quantitatively identifying the amounts of investments and expenses for environmental preservation, and to make decision-making processes in a more reasonable way.
- To disclose environmental accounting information to our stakeholders and to fulfill our responsibility to keep them informed.

● Method of Tallying Environmental Accounting Data

Data provided by : Unitika Domestic production sites & Internal Group Companies and Union Co., Ltd.

Applicable period : April 1, 2012 to March 31, 2013

Calculation method: Investment amounts include the environmental investment on items for which the environment is not the main objective. Expense amounts include labor costs, general expenses and depreciation.

Unitika's fiscal 2012 environmental investment was 288 million yen. The main areas of environmental investment were investment to reduce environmental impact and investment to reduce raw materials.

Environmental costs were 1,586 million yen, mainly for maintenance and management of equipment to prevent pollution, waste processing (including recycling expenses), and product R&D to reduce environmental impact.

● Environmental Preservation Costs

(Millions of yen)

Category	FY 2012		Remarks	
	Capital investment	Cost		
Business area costs	Pollution prevention costs	230	639	Pollution (water, air and noise pollution) prevention measures
	Environmental preservation costs	2	70	Energy saving, global warming prevention
	Resource recycling costs	55	377	Waste generation control, Material recycle
Upstream/downstream costs	—	1	Green procurement activities	
Management activity costs	1	80	Environmental management system maintenance environmental education, impact monitoring	
R&D costs	—	368	Developing environmentally-friendly products	
CSR costs	—	37	Forestation improvements, beautification campaigns	
Environmental damage costs	—	14	Quantity-based taxes	
Total	288	1,586		

● Environmental Preservation Costs

The table lists items with a clear basis for calculation that have high substantive benefits for environmental preservation. Note that inferred benefits have not been calculated.

(Millions of yen)

Item	FY 2012
Income from sale of recycled resources	176
Cost reduction from energy-savings	33
Reduction of costs associated with energy-efficient power sources and industrial waste reduction	9
Water usage reduction from recirculation	4

Products and Technologies for Environmental Conservation

Plant-Derived Biomass Material

● **Terramac®**

Terramac is a biomass material made from a plant-based polymer, Ingeo by Nature Works. It eventually degrades into carbon dioxide and water, which are then absorbed into plants that can again be turned into Terramac. Terramac is finding its way into a wide range of consumer applications, such as wrapping films, food containers, teabags, bath towels, construction materials and electronic components.

Among these applications, Unitika has developed the world's first heat-resistant foam containers and food containers made from polylactic acid. These products are attracting worldwide attention for their ability to hold hot water and microwave-compatibility. Terramac is also used as mobile phone casings where high durability and heat resistance are required, and as components of digital multifunction printer which also need to be flame-retardant. In January 2012, Unitika released a new shock-resistant grade for injection molding. While biomass content increased to over 80% in this grade, the shock and heat resistance improved to levels on a par with ABS resins.

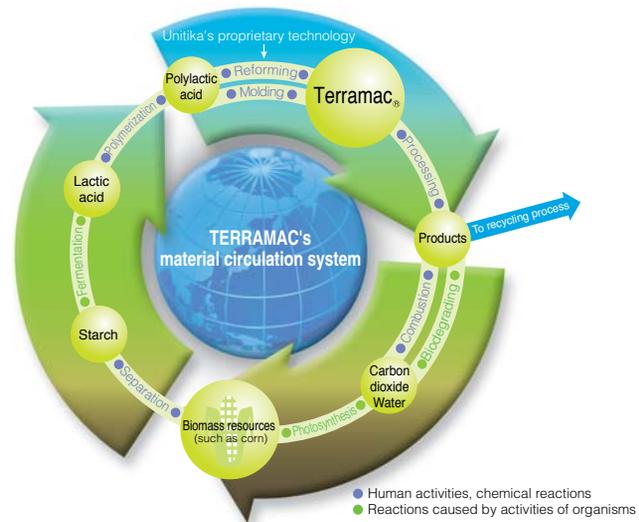
In May 2011, Unitika online shop launched Terramac products with carbon offset. We have made all effort to minimize the carbon footprint of Terramac products from cradle to grave. With the emission rights created from forest sink projects, we further offset the remaining carbon dioxide emission. By introducing carbon offset options, Unitika is aiming to help reduce greenhouse gases. For the customers, the options on already eco-friendly Terramac products offer an opportunity to turn their shopping into more environmentally-friendly.

Combining the natural benefits of plant with human technology, Terramac is designed to be the ideal material for the planet and its inhabitants.



Terramac products with carbon offsets.

Terramac is a part of material circulation system on the Earth



Extremely Eco-Friendly Materials

● **Xecot®**

Made from castor oil extracted from castor oil plant seeds, Xecot is a highly heat-resistant polyimide resin that can be used as a super engineering plastic. It was developed by proprietary research and technology, and enables high-efficiency, high-quality production. It has a higher melting point than conventional heat-resistant polyamides, and offers outstanding heat resistance, crystallization, deflection temperature under load, and reflow resistance. Its low water absorbency and its chemical resistance and electrical characteristics are also outstanding, making it suitable for use in a wide range of applications such as

electrical and electronic components, automotive parts, heat resistant films and heat resistant fibers. It's a biomass plastic that can provide high functionality and quality while helping preserve the environment.



Castor oil plant seeds



Unitika Disaster Area Reconstruction Team

Harnessing the power of the Unitika Group to help reconstruct Japan's disaster-struck areas.

To help reconstruct the areas devastated by the Tohoku earthquake and tsunami of March 2011, Unitika has harnessed the power of its Group companies and business departments to create the Unitika Disaster Area Reconstruction Team. Drawing on technologies and successes accumulated in areas such as nonwoven fabrics, industrial materials, fibers and environmental surveying/measurement, the Team is working on projects such as processing rubble and waste materials, providing products helpful for decontamination and taking radioactivity measurements. The combined power of the Unitika Group is helping reconstruct and revive the region to its former prosperity.



Waste Storage / Transportation



● Appeal High-function covering sheets
Waterproof, deodorizing, flame-retardant sheets for covering rubble and waste. Have been used as covering sheets for disaster rubble in Miyagi prefecture.



● Appeal Lightproof protective mats
Lightproof protective mats with good weather-resistance and outstanding thermal adhesiveness. Made from the filament nonwoven fabric Eleves, which is created from a polyester/polyethylene core-spun yarn.



● Waterproof radiation-blocking sheets
Waterproof radiation-blocking sheets made from compound fibers containing inorganic matter of high specific gravity. Provide the same strength, durability, weather-resistance, water-resistance and flexibility as conventional waterproof materials or tarpaulins.



● Weather-resistant sandbags
Made from high-strength spun-dyed black polyester fiber with outstanding weather resistance, enabling long-term outdoor use. Types for one-year use and three-year use are available.



● Unloading chutes (Sky-Wood-Chute type)
Unloading chutes made of polyester nonwoven fabric, that enable unloading without the use of heavy machinery. Can be installed and operated by small work crews and provide constant yarding capacity, enabling use for transporting and unloading rubble and waste.



● Terramac sandbags
Biodegradable sandbags made from polylactic acid fibers that are degraded by soil bacteria into carbon dioxide and water after use. Available in standard (20 kg) and large (1.8 metric ton) types.



● Eleves capping sheets
Gas-permeable waterproof sheets made from the filament nonwoven fabric Eleves, which is created from a polyester/polyethylene core-spun yarn. The ends of the original fabric are heated and compressed in advance to enable the portions deposited in the site to repel water.

Unitika Disaster Area Reconstruction Team

Surveying/Measurement



● **Future radioactivity prediction**

The Team simulates radiation dose rates several years in the future, and provides radiation distribution charts designed for easy understanding by the general public.



● **Specialized education on work such as decontamination**

Type I Radiation Protection Supervisors provide education in the local area, reducing the workload of busy radiation managers.



● **Local radiation surveying**

Specialist measurement staff measure radioactivity levels, enabling reliable monitoring data to be obtained.



● **Radiation measurement**

The Team is certified with the ISO 17025 international accreditation standard (food category), and can provide reliable measurement values for radioactive substances.

Decontamination Products



● **CsCATCHER cesium-absorbing fiber material**

A fiber product that uses Prussian blue to enable cesium liquated in water to be selectively absorbed. Prussian blue that absorbs cesium drops down, enabling prevention of secondary contamination.



● **Protective clothing materials**

Unitika's protective clothing materials include a type that combines the filament nonwoven fabric Eleves (created from a polyester/polyethylene core-spun yarn) with a high-performance moisture-permeable/waterproof film, and a type that uses a base of biodegradable Terramac nonwoven fabric.



TOPICS

Exhibit at RADIEX 2012

An organization of members from several related departments in the Unitika Group, the Unitika Disaster Area Reconstruction Team exhibited at RADIEX 2012 (Radioactive Decontamination & Radioactive waste Disposal International Exhibition) held at Science Museum, Tokyo from September 24 to 26. Designed to illustrate the combined innovative ability of the Unitika Group as a whole, the Team's exhibit showcased materials and solutions in the areas of waste treatment, decontamination and surveying/measurement. The radioactivity decontamination exhibits generated a lot of interest, and the event attracted 10,450 visitors over the three days it was held. The Unitika booth also attracted a constant stream of visitors, who were very interested in our innovative ideas.



Production Site Information

Production Site	Air				Water							Location Main products	
	Dust	NOx	SOx		BOD	COD	Suspended matter	Oil	Total Nitrogen		Total Phosphorus		
Unit	g/Nm ³	ppm	K-value	ppm	mg/l	kg/day	mg/l	mg/l	mg/l	kg/day	mg/l	kg/day	
Uji Plant Site area: 311,781 m ² ISO 14001 Certification No. JCQA-E-0058 JCQA-E-0249	0.025	199	—	29	12	1131	30	16	—	722	—	98	5 Uji-Tonouchi, Uji-shi, Kyoto, Japan 611-0021 Nylon resin, nylon fiber, engineering plastics, nylon/polyester film
	0.01	70	—	16	3	293	5	1	—	103	—	4	
Okazaki Plant Site area: 313,865 m ² ISO 14001 Certification No. JCQA-E-0292	0.05	100	—	93.3	25	719	20	10	15	385	2	51	4-1 Hinakita-machi, Okazaki-shi, Aichi, Japan 444-8511 Polyester resin, polyester, fiber, spunbond (filament nonwoven fabric), medical equipment
	0.003	76	—	15	3	82	4	0	2	38	0.4	8	
Sakoshi Plant Site area: 191,236 m ² ISO 14001 Certification No. JCQA-E-0093	0.12	89.3	—	—	—	348	3.9	10	15	—	2	—	846 Takano, Ako-shi, Hyogo, Japan 678-0171 Vinyon fiber (for industrial materials such as cement, rubber reinforcements, tatami thread and papermaking binders)
	0.05	33	—	—	—	65	2.8	1	1	—	0.1	—	
Tarui Plant Site area: 156,224 m ² ISO 14001 Certification No. JCQA-E-0323	0.3	180	11.5	—	40	109	50	5	120	43	16	5.6	2210 Tarui-cho, Fuwa-gun, Gifu, Japan 503-2121 Cotton nonwoven fabrics, glass cloth
	0.06	75	1	—	5	29	4	1	2	1	0.1	0.1	
Tokiwa Mill Site area: 64,530 m ² ISO 14001 Certification No. JCQA-E-0221	0.3	130	17.5	—	80	—	100	2.5	—	—	—	—	88 Nakahara, Souja-shi, Okayama, Japan 719-1195 Cotton 100% yarn, Blended yarn with synthetic & cotton, Synthetic woven fabrics blended with cotton
	0.002	82	0.3	—	<1	—	<1	<1	—	—	—	—	
Toyohashi Plant Site area: 270,804 m ² ISO 14001 Certification No. —	0.3	180	0.49	—	—	11.9	70	5	120	—	16	—	101 Matsunami, Akebono-cho, Toyohashi-shi, Aichi, Japan 441-8527 Nonwoven fabrics (sheeting for civil works and roofing applications), biobusiness (cauliflower mushroom: Sparassis crispa)
	0.01	56	0.02	—	—	1	<1	<1	6	—	0.04	—	

• Values in table Regulation values
Measured FY2012 values

Note 1: The displayed regulation values are the most rigorous values mandated by law (Air Pollution Control Law or Water Pollution Control Law), regulations, prefectural guidance or conventions.

Note 2: Includes environmental impact from affiliates within site.

Note 3: SOx = sulfur oxides, NOx = nitrogen oxides, COD = chemical oxygen demand, BOD = biological oxygen demand

Note 4: The displayed air pollution values are the measured values for the major facilities at each site (totals are values for entire site).

Note 5: The displayed water pollution values are the highest values measured at the drain outlets at each site (load amounts are values for entire site).



Inquiries

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