

Under the Slogan of KKR+A



We, the Suminoe Textile Group, are continuing to work on environmental conservation activities such as interior environment improvement and utilization of recyclable materials as well as decreasing our impact on the environment with our fundamental philosophy of "K - Kenko(Health)", "K - Kankyo(Environment)", "R - Recycle" and "A - Amenity : Comfort".

Fundamental Environmental Philosophy

Recently deterioration of global environment has rapidly progressing. It is a mission in common among human beings who live on earth to make efforts to preserve and improve global environment and hand the beautiful earth to our descendants. Suminoe Textile Co., Ltd. well recognized this fact, will make a comfortable and rich society with a cooperation of all the employees positively tackling with environmental preservation activities.

Suminoe Textile Group "SUMINOE Environmental Declaration"

In 2009, the Suminoe Textile Group reviewed its Environmental Declaration, originally released in 1998, and created a revised declaration comprising seven specific declarations on which we are basing our environmental actions.

1 Declaration We shall contribute to the improvement of interior environments and realize comfortable spaces.

Our TRIPLE FRESH deodorant treatment is applied to carpets, curtains, wallpaper and automobile interior fabrics to deodorize unpleasant smells, such as cigarettes, pets, household odors, and Formaldehyde, which is believed to be behind sick building syndrome, by absorbing and dissolving the elements causing bad smells. Other efforts being made by us to create a comfortable and care-free living space include an anti-allergen treatment called ALLER-BLOCK, aimed at suppressing allergen activity, and a skin-care beauty treatment.

2 Declaration We shall respond to the recycling society and positively adopt recycled materials.

We are actively using recycled materials as part of our efforts to promote environmental conservation and the efficient use of natural resources. Specific products launched by us for that purpose include SUMITRON polyester yarn, which is made from recycled PET bottles, a recycling system for carpet tiles in which used tiles are recollected and recycled into new products, the SUMICUBE seat cushion material for railway cars, and the SE Light N simplified raised floor material, made from PP resin, recycled from beer cases.

3 Declaration We shall provide products that enable the reduction of CO₂ and decrease our impact on the environment.

To play a part in curbing global warming and building a low-carbon society, we will develop and provide low-carbon products based on the Life Cycle Assessment (LCA) method. LCA is intended to comprehensively and quantitatively evaluate the impact of manufacturing activities on the environment while taking into consideration the entire cycle of products—materials, manufacturing, transportation, use, and disposal.

4 Declaration We shall use safe/secure materials and always consider health and the environment.

We will provide products that have passed safety rules and regulations, while refraining from supplying products that contain volatile organic compounds (VOC), believed to cause sick building syndrome, or heavy metals, which require special attention in disposal. Instead, we will actively use natural fabric materials such as wool, hemp, and cotton. In addition, we will make consumer-friendly products, such as flooring mats using Olefin film, which is known to emit a minimal amount of toxic gas during burning.

5 Declaration We shall work on resource and energy conservation from manufacturing to the finished product.

We will promote the effective use of resources by reducing losses of primary materials, auxiliary materials, water and energy occurring in production. We will also strive to increase the efficiency of transportation, resources utilization, and waste disposal by constantly updating energy-saving facilities, improving product quality, reducing the weight of products, and simplifying packaging. By taking these measures, we will ensure the saving of resources and energy conservation.

6 Declaration We shall promote the appropriate management of environmentally hazardous substances based on the latest information.

Tougher controls have been in place both in Japan and abroad on the use in products of specified chemical substances. In response to such moves, we will assess all our products and check whether such substances have been used, while establishing a system to adequately control the materials used in our products, based on the Supply Chain Management (SCM) concept. Furthermore, we will keep ourselves abreast of the latest information on product safety.

7 Declaration We shall present and provide products that are conscious of the environment.

Our environmental consideration in manufacturing will be given not only to external product appearance and functions but also to other factors, such as minimizing resources and energy consumption in the process of production, making product recycling easier, manufacturing longer-life products and optimizing waste disposal. We will propose and deliver products based on such an "eco-design concept."

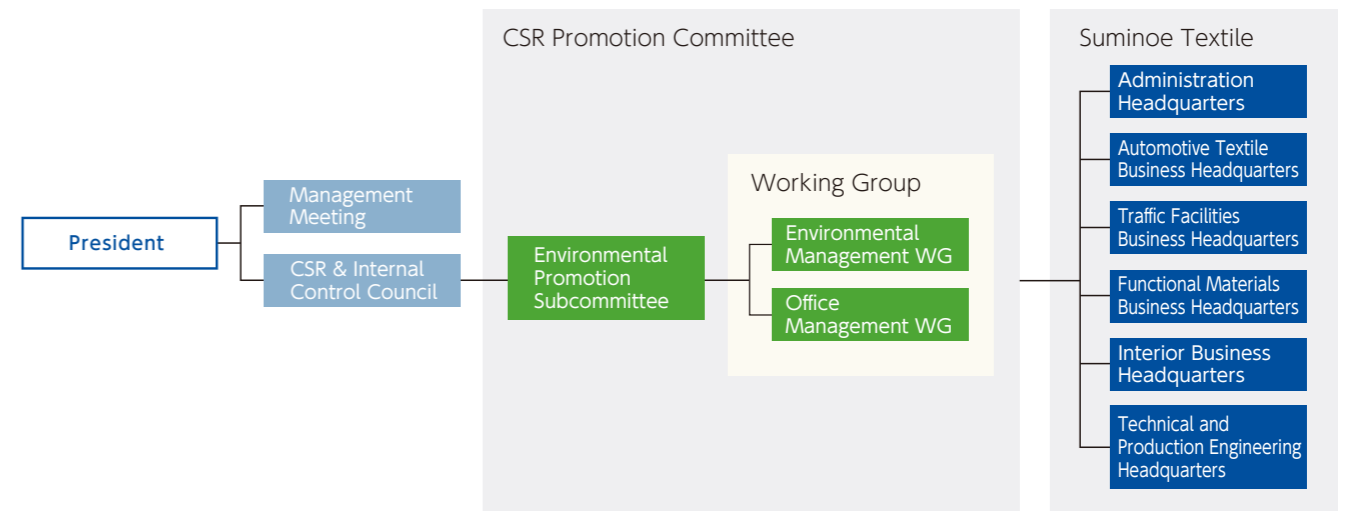
Guideline on Activity

In carrying out environmental conservation activities

- 1 We will positively promote energy-saving, resource-saving, and recycling with a consideration not to contaminate environment in all of our business activities.
- 2 We will try to preserve environment through products' life cycle from production, sales to disposal by developing environment-friendly technology and products.
 - ① Development of technology for energy-saving and resource-saving
 - ② Development of recycling technology and recycling system
 - ③ Development of products and technology to replace materials which would put less load on environment and have more safety
 - ④ Development of product which could improve environment and contribute to health and comfort
- 3 We will try to live together with community through close communication and all employees will start action from whatever one can do.
- 4 We will try to maintain internal system to promote environmental protection and enhance environmental consciousness of all employees.

Environmental Protection Promotion System

The Environmental Promotion Subcommittee was set up within the CSR Promotion Committee. Measures drawn up and finalized by the subcommittee are implemented in all divisions and departments throughout the Group.



Introduction of environmental management system

The Nara Factory obtained ISO14001 certification in fiscal 2000, making it the first among the Group to be awarded certification on environmental management. To date, five factories have obtained ISO14001:2004 certification, and one factory Eco Action 21 certification.

	ISO14001 : 2015			Eco Action 21 : 2009
	Nara Factory, Shiga Factory	Teijin Teclath Ltd.	Owari Seisen Co.: Head Office Factory, Ishikawa Factory	Tango Textile Co.
Screening and registration agency	Japanese Standards Association	Japan Quality Assurance Organization	Japan Quality Assurance Organization	Institute for Promoting Sustainable Societies
Registration number	JSAE 235	JQA-EM1519	JQA-EM3114	0009522
Registration date	May 2000	April 2001	March 2003	July 2013
Registration renewal	6th renewal completed (May 2018)	5th renewal completed (April 2016)	5th renewal completed (July 2017)	2nd renewal completed (July 2017)

Environmental commitment

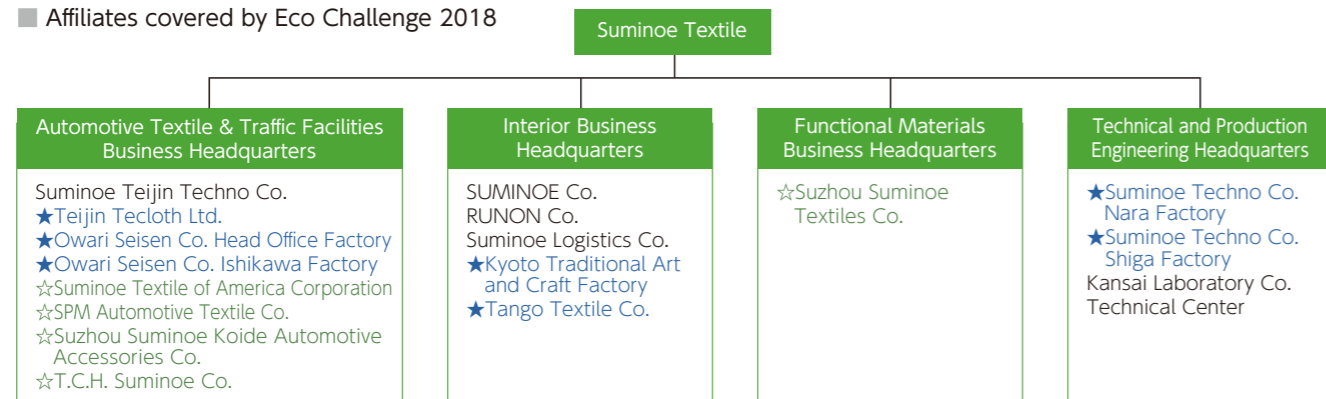
Business activities undertaken by the Suminoe Textile Group are deeply connected to the environment. This holds true to our daily operations, as well as to the entire lifecycle of our products—from product development and design, material procurement, production, sales, distribution, consumption, disposal and recycling. The Suminoe Textile Group is working on assessing and reducing the impact on the environment from our business

activities as a whole and our products throughout their lifecycle. We are committed to manufacturing environmentally friendly products. One example is active use of recycled materials, including polyvinyl chloride powder recycled from used carpet tiles, and raw cotton and polyester pellets recycled from PET bottles. In conducting CSR activities, we also focus on environmental conservation, and Group-wide efforts are underway to achieve the goals set under Eco Challenge 2018.

Eco Challenge 2018 (Fourth Medium-Term Activity Goals)

We have formulated Eco Challenge 2018 (Fourth Mid-Term Activity Goals), as a set of goals on environmental protection. Its duration is three years from fiscal 2015 to 2017, during which we promote environmental activities.

Affiliates covered by Eco Challenge 2018



★Domestic factories: Subject to meeting numerical targets on the use of recycled materials, the amount of industrial waste generated (the recycling rate and the rate of industrial waste disposed of at final disposal sites) and the amount of PRTR-designated substances handled
 ☆Overseas factories: Subject to meeting numerical targets only regarding energy consumption and water consumption

■ Period: Fiscal 2015–2017 (three-year plan; data collection lasting between June 2015 and May 2018)

Activity Goals and Fiscal 2017 Results

○:Attained △:Not attained at some factories ×:Not attained

No	Work areas		Final numerical targets	Base FY	Numerical targets for FY2017	FY2017 results	Evaluation
1	Prevention of global warming	Reduction of energy consumption	3% reduction(Basic unit)	2014	-3%	-10.1%	○
		Reduction of fuel consumed by company-owned vehicles	3% reduction(Basic unit)	2014	-3%	-27.4%	○
2	Resources conservation	Reduction of water consumption	3% reduction(Basic unit)	2014	-3%	3.8%	△
		Increased utilization rate of recycled material	3% improvement	2014	3%	0.9%	△
3	3Rs regarding waste material	Reduction of industrial waste	3% reduction(Basic unit)	2014	-3%	-4.9%	○
		Increase of recycling rate	65% or more	-	65% or more	67.9%	○
		Reduction of waste disposal rate via land reclamation	10% or less	-	10% or less	10.9%	△
4	Prevention of environmental pollution	Reduction of air pollution (reduction of NOx emissions)	3% reduction(Basic unit)	2014	-3%	-5.8%	○
		Reduction of emissions reported under PRTR system	3% reduction(Basic unit)	2014	-3%	-14.5%	○
5	Promotion of green activities	Improvement of green stationery purchase rate	95% or more	-	95% or more	87.6%	△
		Reduction of paper consumed by photocopying	3% reduction(Total amount)	2014	-3%	5.1%	△
6	Promotion of LCA assessment for products	18 items under LCA assessment	-	6 items	34 items	○	
7	Promotion of development of environment-friendly technologies	3 cases	-	1 case	1 case	○	
	Promotion of development of environment-friendly products	9 cases	-	3 cases	3 cases	○	
8	Promotion of biodiversity preservation in business activities	-	-	-	-	-	
9	Consolidation of data on environmental impact of overseas factories and reduction of such impact	Compilation of data for all overseas factories	2014	+2 companies	0 companies	×	

■ Basic unit : Consolidated sales used as a denominator for calculation

■ Conversion coefficient : The amount of CO₂ emissions is calculated based on a conversion coefficient set in accordance with the law to promote measures against global warming. The amount of NOx emissions is calculated based on a conversion coefficient used in the 2002 edition of Eco Action 21. The amount of CO₂ emissions at overseas factories is calculated based on a conversion coefficient set for each country in the 2007 GHG protocol.

Fiscal 2017 results are shown divided into two categories: consumption (input), and waste generation and emissions (output). By promoting environmental activities under this three-year plan, the Suminoe Textile Group achieved significant results in the prevention of global warming, prevention of environmental pollution, etc.

INPUT

Reduction of Energy Consumption Prevention of global warming

We assess the results of our energy-saving activities, based on the calorie equivalent of our energy consumption*. Throughout the period of Eco Challenge 2018 activities, the Suminoe Textile Group achieved the energy consumption targets.

*Unit of calorie equivalent of energy consumption: GJ (gigajoule)

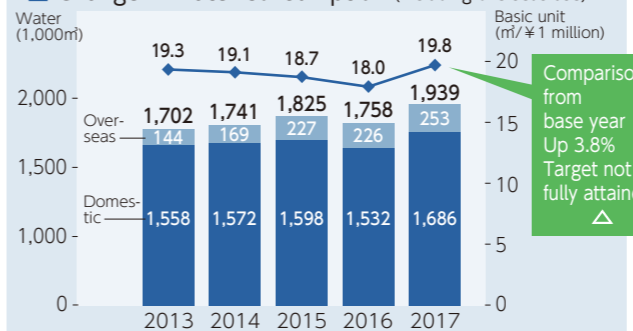
Change in calorie equivalent of energy consumption (including overseas consumption)



Reduction of water consumption Resources conservation

We are promoting the cyclical use of cooling water. In fiscal 2017, our water consumption increased as a consequence of an increase in the production of automotive-related products.

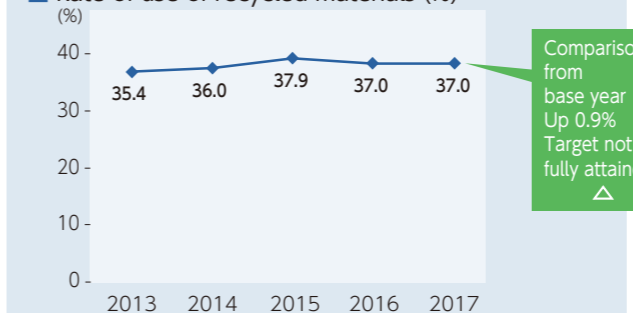
Change in water consumption (including overseas use)



Increased Utilization Rate of Recycled Materials Resources conservation

We are actively using recycled materials for product manufacturing to make savings in resources. The utilization rate of recycled materials has leveled off, due to an increase in the production of products with a low recycling rate at the main factories.

Rate of use of recycled materials (%)

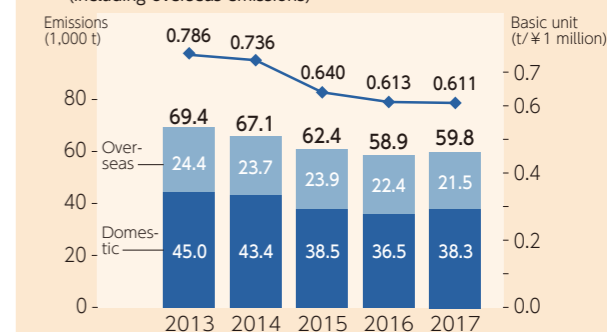


OUTPUT

Reduction of CO₂ Emissions Reference data

We assess the impact of our corporate activities on global warming, based on CO₂ emissions. During the period of Eco Challenge 2018 activities, CO₂ emissions were largely reduced.

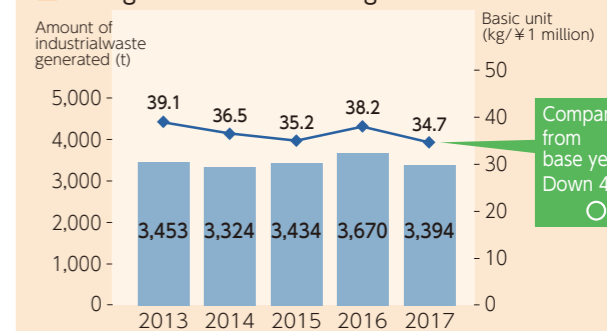
Change in CO₂ emissions (including overseas emissions)



Reduction of industrial waste generated 3Rs regarding waste material

We will continue striving to reduce industrial waste generation, by minimizing materials that are never used as a part of our products, by not manufacturing products that do not pass quality standards, and by making effective use of resources.

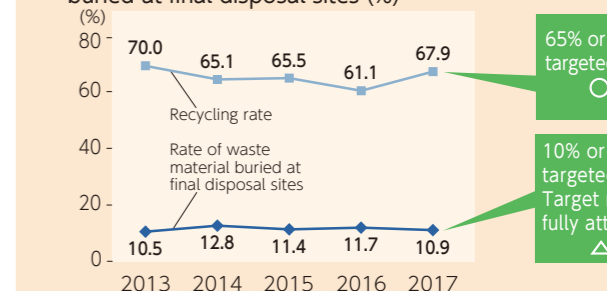
Change in industrial waste generated



Increasing the Recycling Rate and Reducing the Waste Disposal Rate via Land Reclamation 3Rs regarding waste material

In fiscal 2017, some operation sites could not attain the target for the waste disposal rate via land reclamation. We will redouble our efforts to maintain a long-term improvement trend.

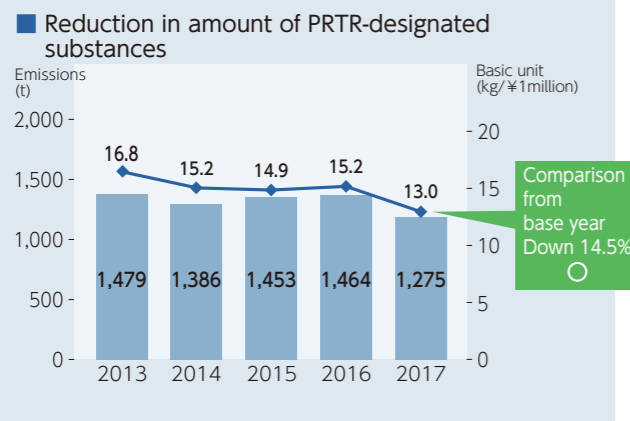
Changes of recycling rate and rate of waste material buried at final disposal sites (%)



INPUT

Reduction in the Amount of PRTR-Designated Substances Handled

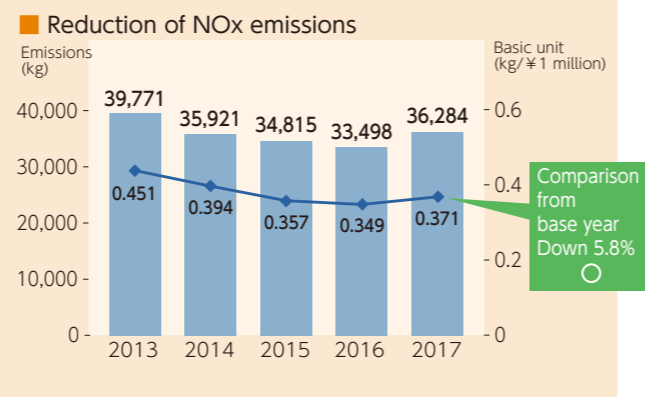
Atmospheric emissions of deca-brominated diphenyl ether (DBDE), used as a fire retardant, and perfluorooctanoic acid (PFOA), used as a fluorosurfactant, are being replaced by safer alternatives, as their use is likely to be banned in the future.



OUTPUT

Reduction of air pollution (NOx emissions)

Substances that may become air pollutants include NOx, SOx, and other fine particles. NOx is used here as an example to explain the situation of air pollution. The amount of NOx emissions is calculated based on the emission coefficient used in the 2002 edition of Eco Action 21 for facilities where no emission-cutting measures were taken.

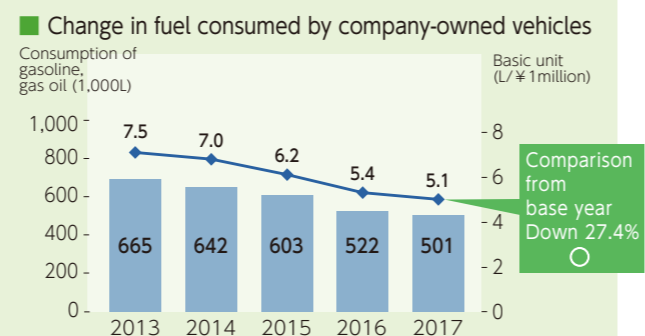


GREEN PURCHASING

The Suminoe Textile Group is committed to environmentally friendly business practices in all areas, including non-production domains.

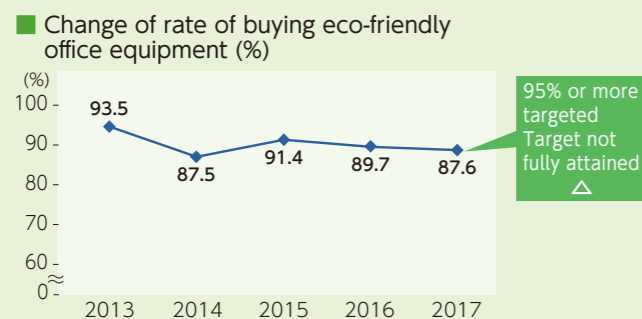
Reduction of Fuel Consumed by Company-Owned Vehicles

We are striving to reduce fuel consumption by company-owned vehicles by promoting eco driving, and adopting a policy of actively switching to fuel-efficient vehicles. We steadily achieved our targets, throughout the period of environmental activities promoted under Eco Challenge 2018.



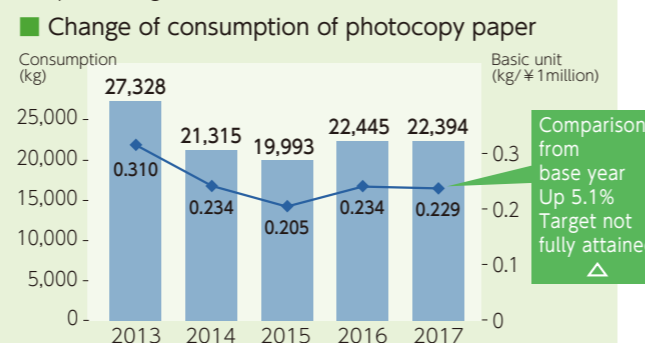
Improvement of Green Stationery Procurement Rate

We are actively promoting purchases of environmentally friendly office equipment and supplies to reduce their impact on the environment across the entire life cycle of such products, from collection of materials to disposal. In the future, we will add momentum to green purchasing, by such means as strengthening measures to increase the green purchasing rate at some offices/factories that did not attain the target.



Reduction of Paper Consumed by Photocopying

We are making efforts to reduce the use of photocopy paper by promoting the use of the in-house intranet and printing on the reverse side of used paper. We will continue working to carry on a long-term reduction trend.



Promotion of LCA Assessment for Products

Promotion of LCA* Assessment for Products (6 Items Targeted)

We have established a system to conduct in-house LCA assessments for products, with a total of 18 items set as assessment targets for the three years from fiscal 2015 to 2017. We carried out LCA assessments for 34 items under seven marks of the "closed-loop recycling" ECOS® series of carpet tiles in fiscal 2017, exceeding the target of six items for that year.

*LCA: Stands for lifecycle assessment. LCA is a method to quantitatively evaluate the resources used to produce a product at each stage of its lifecycle—from raw material procurement, manufacturing, distribution and use to disposal—as well as its load on the environment, and also the potential environmental impact that the product and resources may have on the Earth and ecosystems.



34 items Target attained

Promotion of Development of Environment-Friendly Technologies / Promotion of Development of Environment-Friendly Products

Promotion of Development of Environment-Friendly Technologies (One Goal Set)

1 トリプルフレッシュ®ケア (TRIPLE FRESH Care)

We have developed a treatment technology for curtains used at nursing-care facilities. This technology combines a deodorization function that is exceptionally effective for smells related to nursing care, with flame retardancy.

One product Target attained

Promotion of the Development of Environment-Friendly Products (3 Goals Set)

1 Smart Veil, a voile curtain that intercepts the sunlight in summer and welcomes it in winter

2 *Kakidanomi*, a supplement whose raw material is a persimmon polyphenol extracted from persimmon (*kaki*) fruits that have been thinned out.

3 RUNON Rin, paper for fusuma (sliding paper doors) made from more than 85% recycled paper, using eco-friendly printing technology

Three products Target attained

Environmental Activities for Preserving Biodiversity in Business Operations

Factories run by the Suminoe Textile Group have been undertaking various unique activities since fiscal 2013 in order to protect biodiversity based on the environmental protection guidelines the Group adopted in fiscal 2011.

Activity Policy

1 Reduction of impact on biodiversity from business activities

- Monitoring the situation on biodiversity around factories and their vicinity
- Using locally-grown native species, not nonnative species, for tree planting
- Periodically cleaning areas near factories and improving environmental conditions there by weeding out grass
- Checking sustainability when biological resources are used as product material
- Promoting development of products with recycled material and building a recycling system to manufacture such products
- Incorporating activities for biodiversity preservation into an environmental management system
- Promoting new measures that are possible at each factory for preservation of biodiversity

2 Activities to seek suppliers' cooperation in reducing impact on biodiversity across the entire supply chain

- Seeking cooperation from suppliers in observing green purchase guidelines, to promote our efforts to preserve biodiversity

3 Social contribution activities

- Supporting groups engaging in forestry preservation activities
- Supporting green charity activities

Activity Results

[Nara Factory of Suminoe Textile Co., Ltd.] As a member of the Ando Ouyu-Kai (Ando Association for Growing Cherry Trees along the Okazaki River), the factory has taken part in activities to develop a promenade in the area along the Okazaki River (Ando Town, Nara Prefecture) flowing south of the factory, by improving a cherry tree-lined road. In the area, events are held to enjoy viewing cherry trees protected and grown through these activities, offering a place of relaxation for local residents.

[Shiga Factory of Suminoe Techno Co., Ltd.] The "Sasayuri" lily is the flower of Koka, the city where Shiga Factory of Suminoe Techno Co., Ltd. is located. However, the population of the Sasayuri lily, which symbolizes the harmonious coexistence of people and nature, has been on the decline in recent years. The factory's employees have been working on propagating the Sasayuri, by growing its bulbs and planting them in the ground within the factory premises. They are pleased to see Sasayuri lilies beautifully blooming every year.

[Factory at the head office of Owari Seisen Co., Ltd.] The factory has been supporting the project which is working to revive fireflies on the Kiso River and in other wetland areas, as a member of the Ichinomiya Heisei Firefly Association.

