

# Environment

## Environmental Initiatives



### Environmental Policy

#### Basic Policy

Recognizing that environmental issues are a challenge common to all mankind, Nippon Pillar Packing is aware of its social responsibility as a corporation, and as a good corporate citizen, we are actively working to preserve the global environment. We will also contribute to the development of local communities, aiming for the sustainable development of society and the Company.

<p><b>(1) Compliance with laws and regulations</b> In addition to complying with domestic and international environmental laws and regulations, we pledge to establish and adhere to our own voluntary standards that take into account the needs of society.</p> <p><b>(2) Development of products that contribute to environmental protection</b> As a manufacturer of fluid control equipment, we develop technologies and products that contribute not only to improved performance but also to the emergence of a society committed to sustainability through environmental protection initiatives.</p> <p><b>(3) Controlling environmental pollution in our business operations</b> We strive to prevent pollution and protect the environment by</p>	<p>reducing the amount of waste generated, recycling the waste generated, reducing the use of environmentally hazardous substances, while complying with pollution control regulations intended to protect the environment.</p> <p><b>(4) Improvement of environmental management system</b> Recognizing the environmental impact of our business operations, we strive to continuously improve our environmental management system.</p> <p><b>(5) Cooperation with society</b> We develop environmental conservation initiatives in cooperation with stakeholders in an effort to meet the expectations of society.</p>	<p>March 3, 2021</p>
---	--	----------------------

### Structure for Promoting Environmental Conservation Measures

In September 1999, our Sanda Factory obtained ISO 14001 certification. The Fukuchiyama Factory was also certified in September 2002. We have an ongoing environmental improvement program at these two sites. We have also established an environmental management structure at the two sites. A Global Environment Committee chaired by the executive officer responsible for the environment oversees environmental management, working to reduce our impact on the community and local environment.

Furthermore, each site has established an Environmental Management Committee with the aim of reducing the environmental impact of our business activities and developing environmentally conscious products. These initiatives are reported to the ESG/SDGs Promotion Committee, chaired by the President, to enhance the effectiveness of each committee, and management reviews are conducted at the Management Meeting and meetings of other bodies to ensure continuous improvement.



### Environmental Audit

Our Sanda Factory and Fukuchiyama Factory, both of which are ISO 14001 certified sites, underwent regular ISO 14001:2015 audits to verify that the environmental management system is being operated appropriately and that continuous improvements are being made.

As for the audit results, no nonconformities were pointed out as in fiscal 2019. In addition, the follow-up survey on industrial waste disposal and the efforts to improve the corporate brand through environmental conservation in the

new construction of our technology development center were evaluated as good examples of environmental management system activities.

In addition, the Sanda Factory and Fukuchiyama Factory voluntarily conduct internal environmental audits every year at all departments to confirm environmental initiatives and to ensure continuous improvement of the environmental management system.

### Risk Management

We perform regular disaster drills organized by the Disaster Prevention and Pollution Control Subcommittee to prepare for situations that may have a severe impact on life, property, and our living environment.

In fiscal 2020, we conducted large-scale earthquake evacuation drills for all employees at our head office, Sanda Factory, Fukuchiyama Factory, and Kyushu Factory. The drills

covered a variety of damage scenarios, including confirmation of communication via disaster prevention radios and satellite phones, firefighting, disaster victim transport activities, rescue activities, and cardiopulmonary resuscitation to minimize damage. We will continue to strengthen our life-saving drills, the initial phase of our BCP.

### Compliance with Measures for Laws, Regulations and Other Obligations

We always obtain the most up-to-date information to ensure we comply with environmental laws, agreed values of municipalities, etc., clearly setting out all compliance requirements in the "Environmental laws, regulations, and other requirements list." We also conduct regular surveillance and measurement to ensure scheduled reporting and record-keeping to prevent violation of laws and regulations and contamination of the local environment.

The facilities governed by laws and regulations and the regulated items at the Sanda, Fukuchiyama, and Kyushu Factories are summarized in the table to the right. We conduct regular surveillance and measurement to improve matters of concern and to maintain and preserve the environment.

	Applicable laws	Applicable facilities	Regulated items
Atmosphere system	Air Pollution Control Act	Absorption-type water cooler/heater	Soot and dust, sulfur oxides, nitrogen oxides
		Exhaust gas cleaning system	Items stipulated in Fukuchiyama City Environmental Conservation Charter
		Factory dust collector	Smoke and soot
Water system	Sewerage Law	Factory wastewater	Items stipulated in the Sanda municipal sewerage ordinance wastewater standard
		Water Pollution Control Law	Storm drainage
Soil contamination	Environmental standards for soil contamination	Groundwater on site	Chromium compounds, dichloromethane
Noise	Noise Regulation Law	All factory facilities	Soil study of substances used, in association with geographical history survey
			Noise at site boundary

### Response to Toxic Substances

Under the provisions of the Pollutant Release and Transfer Register (PRTR), which requires companies to manage specified chemical substances that have an environmental impact, we notify the competent authorities every year regarding these substances. We also have an ongoing program of considering switching to non-specified alternatives and cutting usage, emission, and transfer of specified substances.

#### Substances Subject to Notification under the PRTR Law (nonconsolidated)

Name of substance	Decree number	FY2016			FY2017			FY2018			FY2019			FY2020		
		Amount used	Atmospheric emissions	Waste transfer	Amount used	Atmospheric emissions	Waste transfer	Amount used	Atmospheric emissions	Waste transfer	Amount used	Atmospheric emissions	Waste transfer	Amount used	Atmospheric emissions	Waste transfer
Xylene*	80	2,028	20	67	2,365	13	32	1,472	11	76	1,980	11	110	1,801	10	56
Chromium and trivalent chromium compounds	87	3,061	0	2,139	3,215	0	2,200	3,411	0	2,400	4,067	0	4,100	3,630	0	2,500
Methylene chloride	186	22,500	19,210	3,290	29,730	26,000	3,730	29,600	25,700	3,900	28,500	23,300	5,200	39,700	37,000	2,700
1,2,4-Trimethylbenzene*	296	2,328	12	76	2,726	14	35	2,291	11	86	2,282	11	130	2,050	11	39
Lead	304	1,568	0	0	4,673	0	0	0	0	0	0	0	0	0	0	0

Xylene, chromium and trivalent chromium compounds, methylene chloride, 1,2,4-trimethylbenzene, and lead are subject to notification under the PRTR Law.  
 \* Kerosene fuel consumed by combustion is not included in the amounts of emissions and transfer.  
 (Note) Listed here are substances used 1,000 kg or more annually.

### Energy Conservation Activities

We use electricity, kerosene and gas as the main sources of energy for our factories and primarily conduct activities to reduce electricity because of the large amount consumed.

In fiscal 2020, although the amount of electricity consumption increased due to the increase in production volume, we took steps to reduce energy consumption by reviewing the number of fan coil units for chillers and hot

water heaters in the air conditioning system, switching to LED lighting in the factory buildings, and appropriately adjusting the number of compressors in operation according to production conditions.

Thanks in part to these activities, energy intensity per unit of production in fiscal 2020 was 3.9% lower than in fiscal 2019.

### Disposal of Industrial Waste

Industrial waste generated in our business includes scrap metal, scrap fluororesins, waste oils, liquids, plastic, glass, ceramic and wood.

Each factory works to curb the amount of waste generated, while also working toward ongoing communication with industrial waste disposal and recycling companies to promote recycling and reduce the volume of waste disposed. Used paper, cardboard and other general waste are recycled by recycling companies. Our recycling process is designed to prevent leaks of confidential information, with used papers containing confidential information discharged directly to paper mills each year. Beginning with fiscal 2019, the same

process has been adopted for confidential documents at our head office and branch offices.

In fiscal 2020, waste increased at the Fukuchiyama Factory in conjunction with an increase in orders received. However, metal and plastic waste associated with new construction at the Sanda Factory and the transfer of operations decreased over fiscal 2019, resulted in a company-wide drop of 18 points year-on-year on a waste output index basis.

Going forward, we will continue promoting efforts to lower the amount of waste discharged, both to make effective use of limited resources and to further curb the waste generated by our business activities.

### Environmental Accounting

Environmental Conservation Cost (Target Period: April 2020–March 2021)

(Thousands of yen)

	Costs	Capital expenditure	Total	Main items	
(1) Costs within the business area	(1)-1 Pollution prevention cost	58,989	51,121	110,110	<ul style="list-style-type: none"> <li>• Cost of inspection, testing, and administration of sewerage system and for prevention of water contamination; capital expenditure</li> <li>• Cost of inspection, testing, and administration for the prevention of air pollution</li> <li>• Cost of disaster prevention</li> <li>• Cost of eliminating the use of toxic chemical substances</li> <li>• Capital expenditure for prevention of fire and other disasters, inspection, management and maintenance costs</li> </ul>
	(1)-2 Global environmental conservation cost	8,030	29,723	37,753	<ul style="list-style-type: none"> <li>• Updating equipment and investment to conserve energy</li> <li>• Updating equipment and investment to prevent climate change</li> </ul>
	(1)-3 Resource circulation cost	26,920	13,080	40,000	<ul style="list-style-type: none"> <li>• Cost of industrial waste disposal</li> <li>• Cost of general waste disposal</li> <li>• Cost of promoting industrial waste recycling</li> <li>• Capital expenditure for waste reduction</li> </ul>
	(2) Administration cost	3,849	154	4,003	<ul style="list-style-type: none"> <li>• Cost of ISO 14001 audit</li> <li>• External training costs, including training of internal environmental auditors</li> <li>• Environmental education costs, such as books on environmental laws and regulations</li> <li>• Cost of cleanups in factories and surrounding areas</li> <li>• Cost of disaster prevention construction</li> </ul>
(3) R&D cost	263,401	63,161	326,562	<ul style="list-style-type: none"> <li>• Cost of development and improvement of environmentally conscious products</li> <li>• Capital expenditure for development of environmentally conscious products</li> <li>• Capital expenditure for evaluation and testing of environmentally conscious products</li> </ul>	
(4) Social activity cost	10,308	125	10,433	<ul style="list-style-type: none"> <li>• Cost of cleanups of surrounding areas near factories</li> <li>• Contributions to local environmental funds</li> <li>• Cost of publishing our Integrated Report</li> </ul>	
<b>Total</b>	<b>371,497</b>	<b>157,364</b>	<b>528,861</b>		

### Fiscal 2020 Voluntary Environmental Activity Targets and Track Record

No.	Challenges	Department	Environmental initiatives	Fiscal 2020 environmental targets	Content and results of activities
1	Energy saving	Production Division	Saving energy with equipment	Implementation of applicable operations in accordance with the production status of compressors	<b>[Result: 3 units reduction in total]</b> Number of units in operation adjusted according to production status
2		Production Division	Saving energy with equipment	Examination and verification of energy-saving improvement measures 3 items/year	<b>[Result: Improved (3 items)]</b> LED lighting adopted Inverter adopted to suppress motor output Multi-cavity nut mold
3		Production Division	Reducing waste	Reduction of defective antenna waste Target: 0.06 kg/million yen	<b>[Result: 0.04 kg/million yen]</b> Measures taken to prevent lifting of double-faced tape
4		Production Division	Improving recycling rate	Fluororesin recycling rate: 90% or more Search and creation of recyclable products: 1 product/half year	<b>[Result: Recycling rate of molded prototype: 97.9%]</b> Carbide tool recycled Fluororesin used in PFA extruded round bar recycled
5	Waste emissions	Production Division	Reducing waste	Reduction of defect rate of injection molded products Defect rate: 3% or less	<b>[Result: Defect rate (2.6%)]</b> Annual defect rate 2.6%: Target achieved
6		Production Division	Reducing waste	Reduction of foreign matter defects in pump materials (Defect rate: 2.2% or less)	<b>[Result: Defect rate (2.14%)]</b> Target annual defect rate achieved by continuous feedback to operators
7		Production Division	Reducing waste	10% reduction in fluororesin waste	<b>[Result: Reduction rate (66%)]</b> 66% reduction against the target of 10%: Achieved
8		Factory Staff Division	Reducing waste	10% reduction in food loss	<b>[Result: Waste reduction rate (50%)]</b> Target values exceeded; surveyed increase/decrease in manpower; investigated the amount of waste
9	Reduction of environmentally hazardous substances	Procurement Division	Promoting green procurement	Strengthening green procurement and disseminating inside and outside the Company Plan promotion: 100%	<b>[Result: Plan promotion rate (100%)]</b> Green Procurement Standards were issued and distributed externally, questionnaires were conducted, and the standards were steadily implemented internally.
10		Technology and Development Division	Development of bipolar plate for redox flow batteries	Oxidation resistance at customer Evaluation achievement rate: 100%	<b>[Result: Achievement rate (100%)]</b> Customer evaluation results of new materials were satisfying
11	Development of environmentally conscious products	Technology and Development Division	Development of resource-saving products	Sales of environmentally conscious products to customers (10 customers/year)	<b>[Result: Provision to customers (16 customers)]</b> 16 customers against the target of providing to 10 customers: Target achieved
12		Technology and Development Division	Development of energy-saving products	Penetration of long-life products with new sliding materials Development of 2 new materials	<b>[Result: New material development (2 materials)]</b> 2 new materials: Target achieved

#### Column

#### Curbing energy consumption during production with a spur-of-the-moment idea

We use a lot of energy in the production of fittings and tubes, our main products, because the resin is melted at a high temperature in a cleanroom where air is circulated 24 hours a day and then pressed into molds for molding.

I am working to reduce this energy consumption. Specifically, my job is to contribute to resource and energy conservation by designing injection molds, prototyping, and improving facilities to reduce defective products and improve productivity. It is not easy to question the status quo and the norm, formulate a hypothesis, verify it, and implement it, but I will never forget the joy I felt when I was able to halve the energy consumption per product with a sudden idea. With this experience as my motivation, I would like to continue to work on saving resources and energy without wasting limited resources.



**Kenta Onishi**  
Injection Engineering Group,  
Fukuchiyama Production  
Engineering Department