



Address	21, Sunayama, Kamisu, Ibaraki 314-0255, Japan	
Site area	Approx. 247,000m ²	
Completed	April 1983	
Employees	158 (As of March, 2020)	
Main products	Fluoresin, chemical products, functional materials	
ISO 14001 certified	January 1997	
Latest ISO 14001 update	March 24, 2019	

■ **Kashima Plant Certified as Stage 2 Bronze Rank Green Heart Factory**

In 2017, the Kashima Plant received Stage 2 Bronze Rank. This was the result of all employees making that all important extra effort and working together to systematically reduce environmental impact while strengthening relations with society.

Stage 2 Green Heart Factory:

Since fiscal 2005, the Daikin Group has established a certification system based on its original standards, which evaluate environmental and social attributes for environmentally advanced factories. In fiscal 2017, the standards were revised (Stage 2) in order to promote higher level initiatives.

In addition to the existing seven standards including environmental impact reduction, such as reducing CO₂ emissions, and involvement with the community, a four-stage certification ranking was established (out of 200 points: bronze for 150 points and above, silver for 170 and above, gold for 190 points and above, and platinum for 195 points and above). These rankings involve additional evaluations on the rollout of systems or initiatives that involve all employees; thereby assessing whether environmental activities are conducted on an organization-wide level.



■ **Products Developed and Manufactured at Kashima Plant**

Fluororesin Products (Pellets and Powder)

The Kashima Plant makes Neoflon FEP, which has superb insulating properties and is widely used as a molding material, and Polyflon PTFE, which has the lowest friction coefficient among plastic raw materials and superior lubricity.



For their unique properties, fluororesin products are processed and used in a diverse range of applications.



Used on joints of tubes and pipes for its superior safety.



Used on LAN cables for its superior electrical properties.



Used in packing for its superior safety and sealing properties.

Curbing Global Warming

■ Recovering Fluorocarbons

In 1998, the Kashima Plant installed equipment for the destruction of recovered fluorocarbons so that it could carry out this activity on site.

Besides conducting thorough recovery and destruction of fluorocarbons generated during Daikin manufacturing, the Kashima Plant properly destroys the fluorocarbons that the Service Department recovers from customers and other outside entities.



Destruction facilities for recovered fluorocarbon

After the recovered fluorocarbons have been completely broken down at high temperatures, they are rendered harmless.

■ Kashima Plant Gets AAA Rating Under Ibaraki Prefectural Government's Eco Business Registration System*

In February 2011, the Kashima Plant was given the highest rating, AAA, under the Ibaraki Eco Business Registration System.

This rating is in recognition of widespread eco efforts, including energy-saving settings for air conditioning, the turning off of lights during lunch break, separation of garbage, reduction in copier paper use, periodic cleanups of local neighborhoods, waste reduction through in-house processing, and eco-driving.

June of each year is Environmental Month, when employees strive to raise personal environmental awareness by placing slogans on their lockers. The Kashima Plant will continue to improve its environmental activities.



* Ibaraki Eco Business Registration System:

The Ibaraki prefectural government is aiming to create a society with maximum recycling and minimal environmental impact by registering companies with outstanding environmental performance as Ibaraki Eco Businesses.

Energy Saving

■ Energy Saving through Cogeneration Systems

Under a Daikin initiative, a cogeneration system was installed in the Hasaki Industrial Park for shared use by the companies there. The steam given off during power generation is harnessed in order to save energy.



■ Energy-Efficient Chiller

A Daikin energy-efficient chiller was incorporated into equipment in the plant.



■ Conversion to Eco-Pumps

To reduce energy consumption, two water-cooling pumps were replaced with eco-pumps that use high-efficiency motors.



■ Converting Equipment to Inverter Type

After surveying the load changes during equipment use, the plant converted two rotary machines with high capacity and large load changes to inverter type.



■ Steam Traps for Preventing Steam Leaks

The over 500 steam traps in the plant undergo regular inspections and upgrading so as to save energy.



■ **LED Lighting Installed**

Lighting around the factory and offices is gradually being upgraded to highly energy-efficient LED lighting.



■ **Fluorocarbon-Free, Heat-Pump Vending Machines**

The Kashima Plant replaced previous vending machines with fluorocarbon-free, heat-pump models.



Initiatives for Resource Recycling

■ **Achieved Zero Waste Emissions**

In August 2004, the Kashima Plant achieved zero emissions (recycling ratio of at least 99.5%).

■ **Thorough Separation of Waste**

Unnecessary items from production processes are separated for recycling.



■ **Drying Sludge**

To reduce the energy needed to transport sludge to the recycling plant, the sludge is sun-dried to reduce the water content and thus make it lighter.



Preventing Air and Water Pollution

■ Recovering VOC Solvents

The VOC solvents used in the fluoropolymer manufacturing process are collected using activated charcoal to prevent them from being released into the atmosphere.



■ Water Treatment Facilities

All wastewater in the plant is channeled to a single location for purification. Daikin has stipulated an in-house standard value for plant wastewater that is stricter than legal limits. The plant works daily to ensure measurements for items such as COD and pH do not exceed in-house standard values.



Preparing for Emergencies

■ Emergency Convening System

We have established an emergency convening system that sends out mass email to employees to confirm their safety in case of accident or earthquake, and the same system brings together the people needed to carry out this confirmation. In order to verify system functionality, mass email drills are conducted periodically.

■ Stockpiling Emergency Materials and Equipment

To be ready for a wide range of emergencies such as earthquakes, fires, or chemical spills, the Kashima Plant has emergency materials and equipment stored.



■ Emergency Rescue Drills

With the cooperation of the Hasaki Fire Department, once a year drills are held in emergency rescue and use of equipment such as AEDs.



■ Fire Hydrant Usage Competition

The Hasaki Fire Department is invited for emergency situation drills at the Kashima Plant. Fire hydrants are used to make the drills more like an actual emergency.



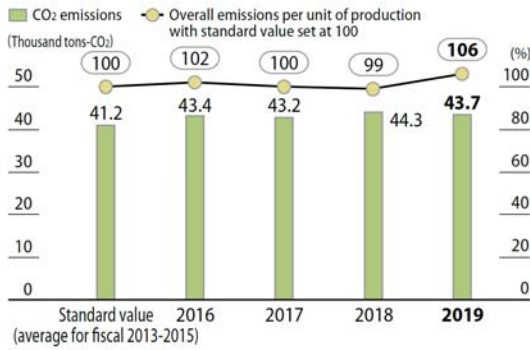
■ Disaster Prevention Drills

Twice a year, large-scale disaster prevention drills are held to practice measures to take in case of a disaster.

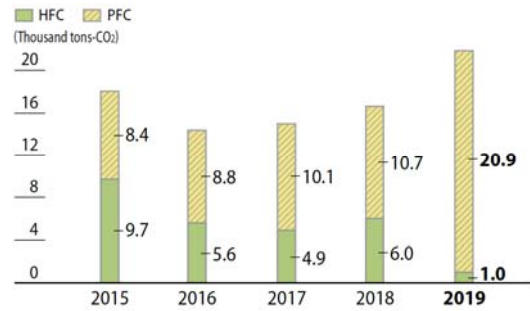


Environmental Performance Data

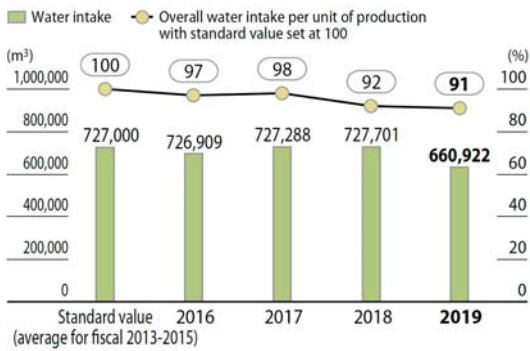
■ Total Energy-Induced CO₂ Emissions, CO₂ Emissions per Unit of Production



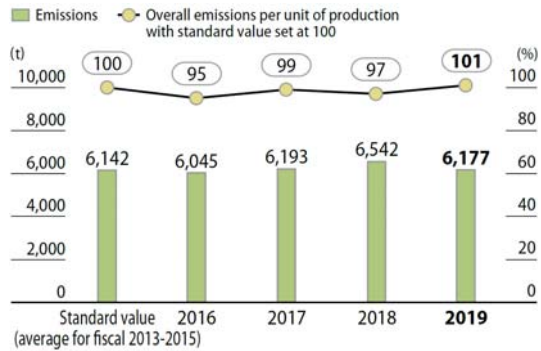
■ Greenhouse Gas Emissions Other than CO₂



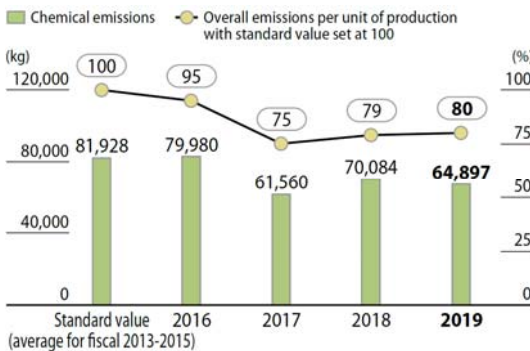
■ Water Intake/per Unit of Production



■ Emissions/per Unit of Production



■ Chemical Emissions/per Unit of Production (total of PRTR substances and VOCs)



Release and Transfer of Chemical Substances (PRTR) FY2019

Substance name	Unit: kg				
	Amount emitted			Amount transported	
	Air	Public waterways	Soil	Waste	Sewage
Chlorodifluoromethane (also called HCFC-22)	23,638.8	0.0	0.0	0.0	0.0
2-Chloro-1,1,1,2-tetrafluoroethane (also called HCFC-124)	0.0	0.0	0.0	0.0	0.0
Chloroform	762.1	0.0	0.0	0.0	0.0
Dichloromethane (also called methylene chloride)	6,863.9	0.0	0.0	0.0	2.0
Hydrogen fluoride and its water-soluble salts	221.1	0.0	0.0	0.0	0.0
Total	31,485.8	0.0	0.0	0.0	2.0

Exchange with Local Communities

■ Daikin Instructors Visit Schools

Daikin employees visit nearby elementary schools to lead science lessons. Through experiments on surface tension, the children learn the joys of science and how scientific advances have helped our daily lives.



■ Factory Tours

Members of the administrative board of Kamisu City take a tour of the Kashima Plant and present their opinions on the facilities, an event that strengthens bonds between the plant and the local community.



■ Summer Festival

One of the ways the Kashima Plant promotes local exchange is by inviting residents and members of the administrative board of Kamisu City to a Noryosai Bon dance festival.



■ Cleanup of Local Streets

On the 25th of each month, all plant employees pick up litter on the streets around the Kashima Plant. All employees also take part in the semi-annual cleanup of Hasaki Industrial Park sponsored by the local federation of companies.



■ Traffic Safety Awareness

Members of the Kashima Plant's traffic safety board take turns standing on the street in front of the plant to raise awareness of traffic safety.

