Zeon Corporation – Takaoka Plant

Takaoka Plant Profile

Main Products
Specialty synthetic rubbers, semiconductor-related products


Aerial view of Takaoka Plant

Established in 1956, Takaoka Plant is a leading Zeon Group plant producing specialty synthetic rubbers and semiconductor-related products. The affiliated companies Optes Inc. and Zeon Medical Inc. are also located on the Takaoka Plant grounds. The Takaoka Plant has the Precision Optics Laboratory, Production Technology Laboratory, and Medical Research Institute operating within it. This enables greater integration between research and manufacturing to shorten the product development timeline.

Plant Policy by the Plant Manager

Takaoka Plant Manager
Koichi Miyagi

The Takaoka Plant's Enterprise Blueprint for 2030 is to make the Takaoka Plant a plant that "lives up to the expectations of society and of the business division to which it belongs, and at which employees can work with enthusiasm and high motivation." We aim to be a plant that maintains the stable, safe production of products that are of real use to the world, which benefits the local community and is environmentally-friendly, and where employees can take pride in their work and will want to continue working at the plant.

The plant manager's policy for FY2021, is to "work toward the realization of our Enterprise Blueprint for 2030, and strive to achieve the targets set for the first year of implementation of the new Medium-Term Business Plan," and we will continue working to address the following priority issues:

1. Aim to make the Takaoka Plant a plant that lives up to society's expectations:
   Realize the goal of zero incidents, zero accidents, zero pollution and zero infection.
2. Aim to make the Takoka Plant a plant that lives up to the expectations of the business division to which it belongs:
   Enhance the overall efficiency of production equipment utilization through production innovation and digital transformation.
3. Aim to make the Takaoka Plant a plant at which employees can work with enthusiasm and high motivation:
   Implement measures aimed at work style reform.

Safety Initiatives

Safety Policy

1. We are committed to reducing the incidence of safety incidents and safety irregularities to zero.

There is a risk that the high-pressure gases and hazardous substances handled at our plant could cause a serious accident if handled incorrectly. In regard to accident prevention, we are focusing on strengthening employee awareness and developing measures to ensure safety.

2. We undertake safety management activities with an awareness of our plant's characteristics.

Our plant is located near residential areas, so the impact of an accident or irregularity would not be confined to our plant and our customers; it could also cause serious harm to local residents. We aim to eliminate safety incidents and irregularities, create a workplace in which employees can work with peace of mind, and be an enterprise that is trusted by the local community, to ensure that local people can go about their daily lives with a sense of security.

3. We comply with safety-related laws and regulations, agreements, and rules and regulations that we have established ourselves.

Besides complying with safety-related laws and regulations, we also comply with agreements that Zeon Corporation and our plant have entered into, and with internal rules and regulations.

4. We implement an ongoing cycle of improvements.

Taking "Safety First" as the foundation, we undertake ongoing development and improvement of our technologies and management techniques. To this end, we set safety management targets which we adjust on an annual basis, and we are constantly striving to achieve an even higher level of safety.

Besides revising and improving our safety management activities, we periodically revise and improve our safety management system and enhance its content.

Specific Initiatives

1. Reduce the risks of occupational accidents

Firmly establish the four safety activities (near misses, risk detection, establishment of FP, and risk assessment), take measures to reduce the risks of occupational accidents, and establish three-dimensional crossing type foolproof measures with the aim of creating a work environment where errors do not occur no matter who performs operations.

2. Reduce safety risks

Identify sources of risks and strive to reduce safety risks based on reviews by manufacturing section managers, equipment management section managers, environmental and safety section managers, and certified hazardous sources identification instructors, along with the latest management control, as well as management of the latest versions and steady implementation of countermeasures.

Also, work to further enhance the overall level of safety with the trial implementation of a hazard and operability study (HAZOP) procedure, as a new measure being implemented this fiscal year.

3. Instill awareness of safety

Continue conducting training on accident case studies and issuing occupational accident calendars so that past incidents and accidents can be used.

Broadcast speeches relating to safety by division and department managers and employees before the start of work each month to maintain and raise safety awareness.

Environmental Impact Reductions

Environmental Policy

1. We are committed to reducing the incidence of environmental incidents and environmental irregularities to zero.

There is a risk that the high-pressure gases and hazardous substances handled at our plant could cause serious environmental pollution if handled incorrectly. In regard to the prevention of accidents and environmental pollution, we are focusing on strengthening the awareness of all employees and implementing related measures.

In addition, we are working toward the goal of achieving zero emissions, to help protect the environment not only on a local scale, but on the global scale as well.

2. We undertake environmental improvement activities based on an awareness of our plant's special characteristics

Our plant is located near residential areas, and relies on the Oyabe River for discharging industrial wastewater, so the impact of an accident or irregularity would not be confined to our plant and our customers; it could also cause serious harm to local residents. We aim to eliminate environmental incidents and irregularities, create a workplace in which employees can work with peace of mind, and be an enterprise that is trusted by the local community, to ensure that local people can go about their daily lives with a sense of security.

3. We comply with safety-related laws and regulations, with agreements that Zeon Corporation and our plant have entered into, and with internal rules and regulations.

Besides complying with environment-related laws and regulations, we also comply with agreements that Zeon Corporation and our plant have entered into, and with internal rules and regulations.

4. We implement environmental improvements on an ongoing basis

We develop and improve economically viable technologies and management techniques on an ongoing basis.

To this end, we set environmental management targets which we adjust on an annual basis, and we are constantly striving to achieve an even higher level of environmental protection.

We also periodically revise and improve our environmental management system and enhance its content.

Scope of Environmental Management System

(1) Organizational unit	:	Departments of the Takaoka Plant, Zeon Corporation
Function	:	Manufacturing of and pilot research on synthetic rubbers, and manufacturing of electronic materials
Physical boundary	:	The entire area of the Takaoka Plant, Zeon Corporation, located at 630 Ogino, Takaoka City, Toyama Prefecture, Japan In addition, although the buildings and grounds of Zeon Takaoka Group affiliated companies and laboratories are out of scope, support is provided for environmental aspects
(2) Organizational activities	:	Business processes from raw materials procurement through to manufacturing, packaging, storage and shipping
Products and services	:	Synthetic rubbers, synthetic latex, electronic materials; providing information to customers, and responding to complaints from customers and the local community
(3) Authority and capacity of managing and influencing organizations	:	Head Office divisions (including design and development), partner companies (product logistics, disposal of industrial waste, etc.), suppliers (companies supplying raw materials, etc.)

Specific Initiatives

1. Reducing emissions of hazardous chemical substances

With a target of zero emissions, Takaoka Plant has installed new equipment to recover organic solvents and is reducing emissions of organic chemical substances in phases.

2. Reducing industrial waste

We study ways to recycle 100% of resources recovered from new facilities and maintain a record of zero tons of industrial waste sent to landfills for disposal.

3. Reducing the negative impact on air and water quality, saving resources, and saving energy

We continue to implement activities to reduce CO_2 emissions, including efforts to reduce the amount of electric power used, and to reduce the amount of steam emitted.

4. Environmental Data * "0" indicates less than 0.5 tons, and "0.0" indicates less than 0.05 tons

Takaoka Plant		FY2016	FY2017	FY2018	FY2019	FY2020
Substances subject to the PRTR Act	Consumption (tons)	22	44	51	10	50
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	6,751	8,046	8,726	9,524	10,904
	Amount generated after compacting (tons)	336	400	434	473	542
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Atmospheric emissions	CO_2 emissions (tons)	20,654	21,167	18,134	17,155	15,909
	SO_x emissions (tons)	0.0	0.0	0.0	0.0	0.0
	NO_x emissions (tons)	0.2	0.3	0.2	0.2	0.2
	Soot emissions (tons)	0.0	0.0	0.0	0.0	0.0
Water resource consumption (1,000 m^3) (industrial water + groundwater + waterworks)		4,079	4,086	4,054	3,926	4,048
Wastewater	Total wastewater discharge (1,000 m^3)	3,428	3,605	3,335	3,216	3,125
	COD emissions (tons)	16.1	15.9	12.7	18.7	9.5
	Total phosphorus discharge (tons)	0.3	0.3	0.6	0.9	1.0
	Total nitrogen discharge (tons)	15	12	19	19	10

Energy	Consumption (crude oil equivalent, kL)	9,605	9,473	8,572	8,614	8,040
	Unit consumption index (FY1990 = 100)	116%	81%	81%	84%	93%
Production equivalent (tons)		52,844	57,863	52,368	50,659	42,812

Relationship with Employees

Policy

We will continue to implement, on an ongoing basis, education and training that are necessary for the efficient operation of the organization and its activities, with the aim of enhancing the caliber and capabilities of every single employee working at the Takaoka Plant.

Specific Initiatives

We established the Takaoka Plant education scheme, which covers basic education, environmental and safety education, vocational education, and quality management education.

・Operator education: Education at the Monozukuri Training Center at Mizushima Plant for employees in their first to third years of employment

・Knowledge of plant operations: Operational skills education mainly through on-the-job training, practical education using emergency response drills and drills simulating abnormalities, and chemical engineering education using CAI to learn scientific principles

Relationship with the Local Community

Specific Initiatives

1. Contributing to the community through volunteering

・Beautification activities in the area surrounding the plant (Zero waste (May 29, 8 participants), Zero Weeds Campaign (September 30, 80 participants)

・Himi coastal cleanup (cancelled)

・Fushikikokubu coastal cleanup (cancelled)

Coastal cleanup

2. Interactions with the local community

・We hold the Zeon Takaoka Group Summer Festival for 600 local residents, employees, and their families to meet and interact (cancelled)

・We participate in local events, including the Futagami Manshou Kai industry–academia–government association (cancelled), the Manyoshu 20 Volumes Recitation Society in Takaoka City (October 2, 47 participants), and the Toyama Marathon in Toyama Prefecture (cancelled)

Zeon Takaoka Group Summer Festival

3. Plant tours

We give plant tours to introduce the plant's production activities and initiatives.

・Plant tours for community residents and groups

・Plant tours for schools and chemistry experiment classrooms for schools

・Plant tours for other companies

・Plant tours for employees' families

Chemistry experiment classroom