

## ZEON Group (Japan)

### Optes Inc.

#### Introduction to Optes Inc.

Optes Inc. is a contract manufacturer for Zeon Corporation that molds and processes products mainly used for optical films and small molded components using ZEONEX<sup>®</sup> and ZEONOR<sup>®</sup>, transparent plastics that Zeon Corporation developed independently. We have production bases in Tochigi and Toyama Prefectures. Our Hokuriku Plant manufactures films for LCD displays, while our Sano Plant in Tochigi produces medical test cells. Through the contributions they make to energy conservation, these products represent our ongoing effort to achieve a more harmonious relationship with the global environment by bringing creative, environmentally friendly products to the world using unique and innovative technologies that neither imitate nor can be imitated themselves.



President Shinichi Hirakawa



Optes Hokuriku Plant  
(Takaoka manufacturing plant)



Optes Hokuriku Plant  
(Takaoka manufacturing plant)



Optes Hokuriku Plant  
(Himi manufacturing plant)



Optes Hokuriku Plant  
(Tsuruga manufacturing plant)

#### Environmental and Safety Activities

##### 1. Comprehensive Safety Efforts

The Optes policy was “increase the value of Optes through workplace skills and discovery skills with safety at the core of all activities,” and we moved forward with efforts to achieve zero incidents, zero accidents, and improved quality. Nearmiss incident identification<sup>\*1</sup>, a basic safety activity, has been developed as a plant index for improvements in the ratio of countermeasures taken.

We will continuously implement risk assessments of our manufacturing equipment and the mid-term plan has the goal of minimizing equipment risk by reducing manufacturing equipment risk evaluations, and we are continually developing initiatives to create safe equipment.

As a means of creating equipment and people that are aware of dangers, we are improving procedures, etc., through public work observation<sup>\*2</sup>, introducing “safety sensation equipment,” and we are creating and implementing systems that allow for safer operations by allowing all employees to sense danger for themselves by means of training and more at the safety sensation training center.

\*1 Near-miss incidents

Near-miss incidents are unplanned events that nearly result in injuries or other losses.

\*2 Public work observation

Work is selected from operational procedure documents, and the work is carried out while the observer (plant managers,

department heads, managerial staff or other workers) inspects the work details and procedural documents to see whether the work is carried out according to procedure, and whether the work is safe, etc., for the purpose of making improvements. This activity also reiterates the importance of working according to procedure.

## 2. Environmental Data

Optes Inc. Sano Plant		FY2010	FY2011	FY2012	FY2013	FY2014
Substances covered by PRTR law	Number of substances	1	1	1	1	1
	Consumption (tons)	0.0	0.0	0.0	0.0	0.0
	Amount emitted (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated (before volume reduction) (tons)	7	6	7	10	8
	Amount sent to landfill (tons)	0.7	0.0	0.0	0.6	0.4
Water resources (Industrial water + Ground water + Waterworks) consumption (1,000 m <sup>3</sup> )		4	4	5	6	6
CO <sub>2</sub> emissions (tons)		1,015	1,105	919	989	862
Energy consumption (crude oil equivalent, kL)		611	664	625	674	564
Optes Inc. Hokuriku Plant		FY2010	FY2011	FY2012	FY2013	FY2014
Substances covered by PRTR law	Number of substances	0	0	0	1	1
	Consumption (tons)	0	0	0	1.2	1.3
	Amount emitted (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated (before volume reduction) (tons)	419	707	849	1,377	1,254
	Amount sent to landfill (tons)	1.5	0.0	0.0	0.0	0.3
Water resources (Industrial water + Ground water + Waterworks) consumption (1,000 m <sup>3</sup> )		50	31	29	29	52
CO <sub>2</sub> emissions (tons)		13,159	8,499	9,622	27,483	34,196
Energy consumption (crude oil equivalent, kL)		10,501	9,390	10,313	12,549	13,612

## Activities with the Local Community

Optes engages with its local communities throughout the year. To help beautify areas near our plant in Toyama, we participate in cleanup efforts in the Kamitako area of Himi City. In spring and fall we pick up litter and pull weeds around our plants, and in summer we clean up local beaches. We also accept field trip requests for high school students, hosting plant tours for two high schools in Toyama Prefecture. One high school student who participated in a tour said, "I'm very proud that products made using cutting-edge technology are being manufactured in Toyama Prefecture." Further, we worked with one high schools to accept students for their internship programs, allowing students to experience working at plants in order to gain firsthand experience of working life. This program is extremely popular, and produces results including the fact that some of the students who participate in the program join Optes after graduation every year.



Picking up trash in Kamitako



Z01 Himi Inazumi Plum tree-planting ceremony in Kamaichi



Polytechnic high school during plant tour (Viewing experience of 3D television)