

## ZEON Group (Japan)

### Zeon Chemicals Yonezawa Co., Ltd.

#### Introduction to Zeon Chemicals Yonezawa Co., Ltd.

Zeon Chemicals Yonezawa Co., Ltd. was established as a fine chemical product production company in 1996 and began production of aroma chemicals which use leaf alcohol\* as a main ingredient in 1997.

The company began production of liquid compounds for reaction injection molding which use dicyclopentadiene as a main ingredient in 1998. It also conducts consigned research work for the Zeon Corporation's new chemical research building opened in 2006. In 2014, the operation of the plant for verifying reactions by the use of special catalysts was launched.

\* Leaf alcohol

Green note aroma chemical that uses 2-Buthyne extracted from C5 fractions as a starting material



President Kouichi Miyagi



Zeon Chemicals Yonezawa Co., Ltd.

#### Environmental and Safety Activities

##### 1. Yamagata Labour Bureau Director's Award for Excellence

In October 2014, the company was presented with the Yamagata Labour Bureau Director's Award for Excellence at the Yamagata Prefecture Industrial Health and Safety Convention. Following the Yamagata Labour Bureau Director's Award for Advancement in 2009, receiving this award was a remarkable achievement. The company's safety assurance measures have earned the Plant special recognition for its achievements in preventing industrial accidents and improving health and safety standards. This has led to winning the award by recommendation from the Okitama regional Labour Standards Inspection Office.



Company President receiving the Award for Excellence

##### 2. Activities for Preventing Operating Accidents caused by Human Error

For eight years straight, Zeon Chemicals Yonezawa has had no injuries and no accidents (as of March 2015). In response to the FY2014 President's Annual Policy that declares "each and every individual shall make efforts to implement reforms and improvements to establish stable and safe production," the company has been actively working on preventative measures. In particular, in this fiscal year, experience-based training in operating accidents, verification of past operating accidents, and study meetings under the instruction of leaders have been implemented as activities for preventing operating accidents caused by human error. The company will continue to exercise creativity and ingenuity in conducting its safety and environmental conservation activities.

### 3. Environmental Data

Since 2012, the amount of CO<sub>2</sub> emissions has also increased. This is due to the ongoing year-on-year expansion of experimental installations giving rise to increasing energy consumption accompanying an increase in power usage, and also as a result of changes to the CO<sub>2</sub> conversion factors.

Zeon Chemicals Yonezawa Co., Ltd.		FY2010	FY2011	FY2012	FY2013	FY2014
<b>Substances covered by PRTR law</b>	Number of substances	2	5	4	7	5
	Consumption (tons)	1,231	1,897	1,773	1,642	1,759
	Amount emitted (tons)	0.4	0.5	0.5	0.5	0.5
<b>Industrial waste</b>	Amount generated (before volume reduction) (tons)	87	186	187	202	206
	Amount sent to landfill (tons)	0.4	0.4	0.0	0.0	0.0
<b>Water resources (Industrial water + Ground water + Waterworks) consumption (1,000 m<sup>3</sup>)</b>		-	14	10	9	14
<b>CO<sub>2</sub> emissions (tons)</b>		815	940	1,017	1,151	1,421
<b>Energy consumption (crude oil equivalent, kL)</b>		455	505	439	490	591

### Activities with the Local Community

#### 1. Participation in local cleanup campaign

As part of its contribution activities for local communities, Zeon Chemicals Yonezawa is participating in local environment beautification activities around Yonezawa Hachimanpara Core Industrial Park. Trash was picked up and flower beds were planted around the park in the spring and autumn. By listening to accounts from the Yonezawa City Hall staff members about how illegal dumping is reducing each year thanks to the cleanup campaign, we felt that this activity is helping in the efforts to beautify the area. Zeon Chemicals Yonezawa will continue these efforts into the future.

#### 2. Participation in the Uesugi Yukidoro-matsuri (snow lantern festival)

The Uesugi Yukidoro-matsuri symbolizes the local residents' prayer for peace. Offerings of Lanterns are made at Chinkon-no-oka, in the city of Yonezawa. As a part of our activities as a member of the community, we participate every year by creating two snow lanterns. This year, although the weather was unsettled with heavy snowfalls and rain, even though it was winter, the festival was held successfully.



Staff members with their completed snow lanterns