

Realization of Society Coexisting with Nature

Reducing Chemical Substances

It is KHI's stated goal to contribute to reduced environment impact and conservation of the ecosystem through manufacturing that is in harmony with global environment. KHI undertakes various activities to achieve this goal. Among efforts to reduce chemical substances, KHI has set targets in every business segment for major VOCs, dichloromethane, and hazardous heavy metals, and each segment has embraced the necessary approaches. The status of the efforts to reduce major VOCs, dichloromethane, hexavalent chromium and lead is outlined below. Suitable measures have been implemented in nearly all areas, but efforts will continue on the study and consideration of additional measures to curb the amount of chemicals subject to reduction.

Major VOCs

With regard to major VOCs, KHI promoted the switch to low-VOC paints, such as water-based paint, and improved coating efficiency through electrostatic coating, and also reduced our use of cleaning solvents by installing solvent recovery equipment. We encountered some challenges, such as production increases and customer-specified painting requirements, which prevented us from successfully achieving our VOC-reduction goal and caused emissions to go beyond the fiscal 2011 level. Moving forward, however, we will strive to curb emissions through such measures as the wider application of alternative products, including water-based paints and high-solid paints.

Dichloromethane

Dichloromethane is often found in the paint strippers that KHI uses in our operations. With an increase in production volume, emissions grew over fiscal 2011. Moving forward, KHI will strive to reduce emissions, especially through enhanced recovery methods.

Hexavalent Chromium

Hexavalent chromium is often used in the special surfacing processes that we use in KHI's operations. KHI is keen to introduce technologies that do not utilize hexavalent chromium, but we will need more time before alternative processes are fully adopted. Nevertheless, the amount of hexavalent chromium handled in fiscal 2012 decreased over fiscal 2011, and we will continue to systematically apply potential replacements, such as chrome-free paint.

Lead

Lead is often found in paint, so KHI's efforts have focused on switching to lead-free paint. KHI is working on reducing lead use, and the handled amount was decreased from fiscal 2011. We will work for the further reduction of lead use.

The Seventh Plan, which began in Fiscal 2011, contains the basic policy of driving down the use of chemical substances under control to the absolute minimum (as a rule, totally eliminating heavy metals) by Fiscal 2021. This policy will guide our further reduction activities.

Amounts of Chemicals Subject to Reduction Handled and Emitted (t/year)

Substance		Fiscal 2012	Increase or decrease from fiscal 2011
Major VOCs	Toluene	443	+38.0%
	Xylene	678	+7.1%
	Ethylbenzene	278	-14.7%
	Total	1,399	+9.3%
Dichloromethane		59	+31.1%
Hazardous heavy metals	Hexavalent chromium	23	-14.8%
	Lead	1.4	-17.6%
	Cadmium	0.013	-51.9%

*1 Amounts of major VOCs and dichloromethane are the amounts emitted, while that of hazardous heavy metals is the amount handled.

*2 Cadmium is not included in the collection of data under the PRTR Law because the amount handled is less than 500kg.

Biodiversity-Friendly Society

A short-term target in Japan's national biodiversity strategy, which was revised in 2010, is to analyze the state of biodiversity to get a clearer picture of conditions and based on this knowledge, promote activities to protect biodiversity. We will support efforts to achieve this objective by implementing the activities listed below at all business sites with biodiversity protection in mind. We also undertake activities, such as greening programs on corporate premises that reflect location or other characteristics specific to each operating site.

Efforts to Reduce Environmental Load from Business Activities

- 1 Promote measures to cut greenhouse gas emissions
- 2 Reduce amount of industrial waste for final disposal
- 3 Decrease environmental load from wastewater and chemical substances

Non-Business Activity

- 1 Promote cleanup events around business sites
- 2 Implement greening programs and other activities based on analysis of and insight into biodiversity conditions on corporate premises and the surrounding area
- 3 Embrace collaborative opportunities to protect biodiversity with local groups, such as creating corporate forests