

Environmental Reporting

Corporate Statements

The Kuraray Group
Code of Conduct

Compliance Handbook

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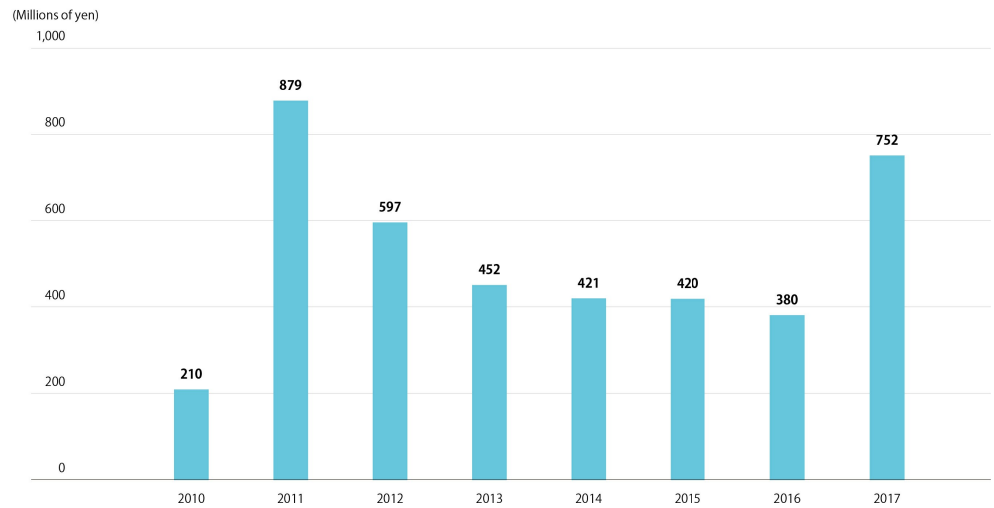
- Total investments for the current period: ¥27.4 billion
- Total research and development expenses for the current period: ¥15.1 billion

Costs for Environmental Conservation (Millions of yen)

Category		Investments	Cost	Principal activities
Costs within the sites	Pollution prevention costs	403	1,314	Operating cost of environmental facilities, measures to prevent emissions of toxic chemical substances
	Global environmental preservation costs	75	11	Cost of energy conservation activities
	Resource recycling costs	133	691	Recycling costs and waste processing costs
	Total	612	2,016	
Upstream and downstream costs		-	109	Recycling and reuse of packaging materials, improvement of container packaging
Administrative costs		106	104	ISO 14001, environmental measurements, environmental education
Research and development costs		34	170	Development of environmentally friendly products
Social activity costs		-	0	Afforestation, beautification, provision of environmental information to host community residents
Environmental damage costs		-	-	
Total		752	2,399	

Note: Environmental damage costs are included in pollution prevention costs.

Trends in Capital Expenditures for Environmental Facilities



Environmental Preservation Effects (Kuraray)

Category		Unit	FY2015	FY2016	FY2017	Increase/decrease
Pollution prevention effect	SOx emissions	Tons	418	330	407	77
	NOx emissions	Tons	1,734	1,705	1,855	150
	Soot and dust emissions	Tons	27	27	33	6
	PRTR substance emissions	Tons	891	905	976	71
	COD load	Tons	501	532	513	-19
Global environment preservation activities	GHG emissions	1,000 tons-CO ₂	1,218	1,250	1,319	69
	Energy consumption	1,000 kL (crude oil equivalent)	402	413	434	21
Resource recycling activities	Landfill and/or simple incineration	Tons	617	879	849	-30
	Rate of effective waste utilization	%	97.7	97.2	96.7	-0.5
	Water resource usage*	million m ³	69	72	71	-1
	Total discharge of wastewater*	million m ³	70	72	71	-1

* Excluding seawater

For detailed environmental data, please visit the site below.

(1) Basis for environmental accounting calculations

- Reporting period: January 1, 2017 to December 31, 2017
- Scope covered: Kuraray sites (Tsurumi Plant has been newly covered from fiscal 2017 due to the merger with the former Kuraray Chemical)

(2) Environmental conservation cost calculation criteria

- Depreciation: Straight-line method
- Standard for allocating costs: In principle, 100% of costs are allocated to individual environmental conservation items. However, a portion of costs is allocated on a pro-rata basis.

(3) Standard for calculating environmental conservation effects

- Effects are calculated in a simple comparison with the total environmental load of the previous fiscal year and are not adjusted for production volume.

(4) Standard for calculating economic effects (benefits) of environmental conservation measures.

- Although material effects such as income from recycling are known, benefits are deducted from environmental conservation costs.

Sites certified according to Environmental Management System (as of the end of December 2017)

(1) ISO14001

- | | |
|---|--|
| • Kuraray Niigata Plant | • EVAL Europe NV |
| • Kuraray Kashima Plant | • Kuraray Europe GmbH |
| • Kuraray Okayama Plant | • Kuraray Europe GmbH Division Troisdorf |
| • Kuraray Kurashiki Plant (including Kurashiki Research Center) | • OOO TROSIFOL |
| • Kuraray Tsukuba Research Center | • Kuraray America, Inc. |
| • Kuraray Saijo Plant | • Kuraray Asia Pacific Pte. Ltd. |
| • Kuraray Tsurumi Plant | • Kuraray Korea Ltd. |
| • Kuraray Plastics Co., Ltd. (Ibuki Plant) | |
| • Kuraray Fastening Co., Ltd. (Maruoka Plant) | |

*1 Includes the following affiliates located within the Kuraray plant sites: Kuraray Kuraflex Co., Ltd., Kuraray Okayama Spinning Co., Ltd., Kuraray Tamashima Co., Ltd., Kuraray Saijo Co., Ltd., Kuraray Techno Co., Ltd., and Kuraray Noritake Dental Inc.

(2) RC14001

- Kuraray America, Inc.
- MonoSol, LLC

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