



Safety



Society



Environment

# Chemical substance management

## ■ Compliance with laws and regulations and reduction of chemical substances

When using chemical substances, the effects on human health and ecological systems must be fully considered. The JR East not only rigidly adheres to established standard values, but restrict the use of such substances and adopt substitutes that have less impact on the environment.

## ■ Reducing and replacing ozone depleting substances<sup>☆</sup>

We endeavor to reduce the use of substances specified as controlled substances under the Ozone Layer Protection Law and adopt substitutes that have less impact on the environment. Moreover, The Act on Rational Use and Proper Management of Fluoro-carbons (The Revised Fluorocarbons Recovery and Destruction Law) came into effect on April 1, 2015 requiring regular inspections, reporting of leakage amount, etc. We have been responding appropriately in accordance with the intent of the revised law. Under the Act for Rationalized Use and Proper Management of Fluorocarbon, we reported a leakage amount of around 5,000 t-CO<sub>2</sub>e for FY2017.

- **Cooling units (large refrigerators)**—We are steadily replacing air conditioning units using specified chlorofluorocarbons (CFCs) with systems that do not use them and completed the removal of such units from buildings.
- **Rolling stock**—Except for some diesel railcars, all of our cars use CFC substitutes. As of the end of March 2017 we were using 1.2 tons of CFCs and 85 tons of CFC substitutes. We routinely check for gas leaks, and collect the refrigerants when scrapping retired railcars in accordance with applicable laws and regulations.
- **Fire-extinguishing agent**—Although 66 tons of halon gas was still in use as a fire-extinguishing agent as of the end of March 2017, we have it under proper control and are replacing it with non-halon agents (such as powder agents and CO<sub>2</sub>) when building new facilities or renovating existing ones.

## ■ Chemical substance management<sup>☆</sup>

As JR East uses chemical substances primarily for painting and repairing our railcars, we take rigorous steps for their use and management in order to prevent spills. We are a company that handles a certain amount of specified chemical substances, and 13 JR East facilities submitted the data regarding the release and transfer of these substances to relevant authorities in FY2017, pursuant to the PRTR System\*.

We have also been introducing stainless steel railcars that do not require painting. At the end of March 2017, as many as 87.7% of the 10,519 cars operated on our conventional lines were stainless steel railcars. Beside their use for railcars, we used 385 tons of organic solvents for painting railway facilities and stabilizing track beds in FY2017.

\*PRTR system A system where companies notify their releases and transfers of chemical substances as required by Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register / PRTR). It encourages the monitoring and control of toxic chemical substances emitted into the environment and measures to prevent negative impact on the environment.

[ Amount handled, released and transferred from 13 reporting-required facilities (kg) ]

Chemical substance	Handled	Released into air	Released into sewerage	Transferred to other facilities
1,2,4-Trimethylbenzene	77,211.8	7,455.5	0.0	1,689.9
Ethyl benzene	1,129.4	1,100.0	0.0	0.0
Xylene	70,191.7	6,873.1	0.0	128.5
Toluene	14,369.4	5,520.0	0.0	70.1
Nickel	2,857.1	0.0	0.0	0.0
n-Hexane	2,576.4	300.0	0.0	0.0
Methylnaphthalene	55,492.7	275.1	0.0	0.0
1,3,5-trimethylbenzene	2,022.0	2,000.0	0.0	0.0
Total	225,850.6	23,523.7	0.0	1,888.5

## ■ Management of PCBs (polychlorinated biphenyls)

Equipment containing PCBs is securely stored in exclusive storage locations and reports on it are filed as required by the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes. We render this equipment harmless to the extent that can be done by PCB waste treatment facilities. In the fiscal year ended March 2017, we had equipment such as stabilizers, transformers and capacitors treated at PCB waste treatment facilities.