Air Pollution Prevention

Policy and Basic Approach

When it comes to air pollutants produced by our plants and R&D labs, such as sulfur oxides, nitrogen oxides, particulate matter and volatile organic compounds (VOCs), Nippon Kayaku not only observes both national and regional laws but adopts yet stricter emission standards. We take proper preventative measures against pollution of the air surrounding our manufacturing and research sites.

System

› System for Promoting Responsible Care

Indicators

Indicator	Covering	Unit	2019	2020	2021	2022	2023
Volatile organic compounds (VOCs)	Non-consolidated	tons	28.6	33.3	52.1	38.7	32.9
Dichloromethane	Non-consolidated	tons	4.9	4.0	3.6	3.2	2.7
Formaldehyde	Non-consolidated	tons	0.04	0.04	0.15	0.13	0.13
NOx*1	Non-consolidated	tons	9.1	7.5	7.7	8.3	6.7
SOx*2	Non-consolidated	tons	1.3	1.0	0.7	0.9	0.8
Dust*3	Non-consolidated	tons	0.9	0.5	0.5	0.4	0.2

*1 NOx (nitrogen oxide): NOx is produced when burned chemical substances react to nitrogen in the air and when fuels and chemical substances that contain nitrogen compounds such as coal are burned. Not only is it a major cause of air pollution including photochemical smog and acid rain, but NOx also has a harmful effect on the human respiratory system.

*2 SOx (sulfur oxide): SOx is emitted when fossil fuels that contain sulfur are burned. SOx reacts with moisture in the atmosphere to form sulfuric acid and sulfurous acid, which are causes of air pollution and acid rain.

*3 Dust: Dust mainly refers to fine particles (soot) found in dust smoke produced when burning fossil fuels. In addition to being a major cause of air pollution, dust can cause humans to contract pneumonoconiosis or other harmful health conditions when breathed in in high concentrations.

› Environmental Management

Initiatives

Reducing VOC and Toxic Air Pollutant Emissions

We are not only working to calculate and reduce emissions of VOCs listed in the Air Pollution Control Act, but of VOCs specified by the Japan Chemical Industry Association also. We are also engaged in reducing emissions of toxic air pollutants from 12 substances we have voluntarily agreed to control, including dichloromethane and formaldehyde. Key examples of initiatives we have taken are listed below.

- Exhaust gas processing equipment installed
- Gas absorption equipment installed
- Regenerative combustion equipment installed
- Working practice reform; review of possible substitutes for chemical substances used
- Leakage prevention measures

Reducing Sulfur Oxides (Sox), Nitrogen Oxides (NOx) and Particulate Matter

Below can be found a list of Nippon Kayaku measures taken thus far to keep emission levels of SOx, NOx and particulate matter below even the legal requirements.

- Switchover of combustibles from C-class heavy oil to A-class heavy oil, LPG and natural gas
- Introduction of low NOx boilers and small-sized once-through boilers
- NOx denitrification equipment installed
- Dust collectors installed