

## Pollution prevention and chemical substance management

#### Background of setting the issue of materiality

Recently, stricter environmental regulations have been enacted in European countries, China, countries in Southeast Asia and other countries. Murata has set this key issue in order to promote initiatives to proactively prepare for these regulatory changes and to minimize impacts on environment.

### Our goal

Murata aims to realize monozukuri in harmony with local communities and takes on challenges beyond the conventional scheme in order to fulfill its social responsibility to provide monozukuri towards a sustainable society.

#### **Pollution prevention**

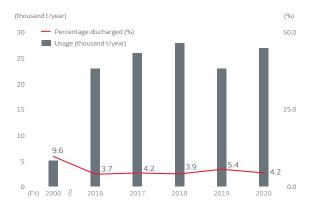
Murata recognizes contamination by chemical substances as a material environmental risk, and has been working to prevent it. In particular, regarding equipment related to storage or intraplant transportation of liquid chemical substances, we are implementing measures by setting four voluntary standards, to prevent accidents. There were no major environmental accidents or violation of environmental laws and regulations in fiscal 2020.

# Voluntary standards for prevention of environmental accidents and pollution (equipment-related)

- Prohibition of underground storage tanks
- Permeation barrier coatings
- Prohibition of underground piping
- Installation of emergency containment structures

In order to control discharge of volatile organic compounds (VOCs), an air pollutant, we voluntarily installed regenerative thermal oxidizers (RTO), a type of exhaust gas treatment equipment, at facilities whose emission level is high, and eliminated 96% of the amount used.

Trends in volume of VOC use and rate of discharge into the atmosphere (Japan)



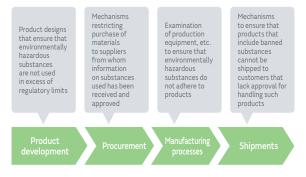
We will promote initiatives to reduce VOC emissions, including introduction of an IoT system to prevent environmental incidents by human error, reconsideration and update of materials and manufacturing methods.

#### **Chemical substance management**

In addition to efforts to comply with laws and regulations such as the RoHS Directive and the REACH regulations\*, we have established voluntary standards that take account of global trends regarding environmentally hazardous substances and customer requests, and actively work to comply with reduction requirements and bans on such substances in our products under the management structure as illustrated in the figure below.

\* REACH regulations: a regulation of the European Union regarding registration, evaluation, approval and restriction of chemicals

#### Management of environmentally hazardous substances at Murata



Furthermore, Murata has been taking proactive actions to address any revisions in laws related to environmentally hazardous substances.

The current RoHS restricts use of ten types of chemical substances in electronic or electric equipment sold in European Union countries. Of these, restrictions on the use of four specified types of phthalic esters were added in July 2019, but Murata had banned the use of these phthalic esters in new products to be developed since July 2017, in advance of the enforcement of the amended RoHS Directive. To prevent contamination through contact, we also included packing materials and tools that come into contact with products in production or logistics processes in the scope of the control.

Murata will continue to promote measures to reduce risks, including exposure risks to the staff in the manufacturing process which requires handling of chemical substances, as well as environmentally hazardous substances contained in the products.