

## Overview of Environmental Impacts

In the course of business operations, Murata has had environmental impacts in various forms, such as through the use of resources and energy. Clarifying an overall picture of such impacts enables us to understand which parts of our business operations have a large impact on the environment.

### Overview of Inputs

Our inputs consist largely of raw materials to produce our products and energy used in our production activities. Murata has promoted group-wide efforts to reduce CO<sub>2</sub> emissions, through implementation of energy audits and other measures. Also, chemical substances comprise a significant ratio of inputs due to the characteristics of our business operations. Murata has implemented stringent and proper management of environmentally hazardous substances, so as to reduce the amounts of their use.

### Overview of Outputs

Our outputs include CO<sub>2</sub> emissions into the atmosphere, generation of wastes, and effluents discharged into rivers and seas. Murata has achieved zero emissions (defined as a 100% recycling rate and zero landfilling of targeted waste matter) at plants and subsidiaries in Japan in March 2004. Going forward, we are planning to reduce the waste generation itself and improve the level of recycling.

Even after delivery to customers, Murata's products can often help our customers save resources and energy when they create products by assembling our products. Therefore, identifying such data is one of our future tasks.

## INPUT

### [Calculation method]

- Chemical substances  
Amount of PRTR\*-listed substances handled at plants and subsidiaries in Japan
- Energy  
Energy and fuel consumed in plants and subsidiaries in Japan and overseas
- Water  
Water consumed in plants and subsidiaries in Japan and overseas

\*PRTR: Japanese Pollutant Release and Transfer Register

## Suppliers

We carry out our own surveys and evaluate the environmental soundness ("greenness") of our suppliers, and thereby determine those suppliers from whom Murata prefers to procure goods.

## OUTPUT

### [Calculation method]

- Chemical substances  
Calculated by multiplying the amount of PRTR-listed substances handled at plants and subsidiaries in Japan by the percentage of substances emitted to the atmosphere and waters.
- Atmospheric emissions  
CO<sub>2</sub>: Calculated by multiplying the consumptions of energy and fuel used in plants and subsidiaries in Japan and overseas by the CO<sub>2</sub> conversion factor.  
NO<sub>x</sub>, SO<sub>x</sub>: Calculated based on measurement results of substance concentrations in emissions from exhaust points of plants and subsidiaries in Japan and overseas.
- Wastes (limited to wastes requiring disposal costs)  
Amount of wastes produced at plants and subsidiaries in Japan and overseas
- Wastewater  
Amount of wastewater discharged to sewage or rivers from plants and subsidiaries in Japan and overseas

Chemical substances	Energy	Water
4,591 t	1,137,513 kℓ (Crude oil equivalent) •Electricity 834,370,000 kWh •Fuel 925,583 kℓ	8,730,000 m <sup>3</sup>



**Murata Manufacturing Group**

We strive to identify the environmental impacts of our products from the development and design stages, and to minimize the impacts in regard to product development.

**Customers**

We promote product development with the aim offering better products that can help our customers minimize environmental impacts, even after these products have been delivered. In the future, we will work to obtain and compile relevant data to enhance our activities even more.



Chemical substances	Atmospheric emissions	Wastes	Wastewater
29.8 t	•CO <sub>2</sub> : 455,154 t-CO <sub>2</sub> •NO <sub>x</sub> : 84.0 t •SO <sub>x</sub> : 16.2 t	34,679 t	8,140,000 m <sup>3</sup>

\* Murata does not emit greenhouse gases other than CO<sub>2</sub>.  
(Greenhouse gases are referred to as those stipulated in the Law Concerning the Promotion of Measures to Cope with Global Warming.)