

Waste Reduction and Zero Emissions

Murata is working to reduce - to as close to zero as possible - the environmental impacts accruing from waste produced as a result of our business activities. Our goal is to contribute to the development of a "recycling society" by reviewing production processes, minimizing the disposal of waste matter, and promoting recycling and reuse.

Targeting Zero Emissions

To achieve the goal of zero emissions, Murata is targeting zero landfilling* of waste matter** (100% recycling rate). Our objective is to achieve this goal by the end of fiscal 2003 by reviewing production processes, minimizing disposal of waste matter, and promoting recycling and reuse. Our recycling rate as of March 31, 2003, increased by 31.6 percentage points to 84.9% (40.1% in overseas plants) compared to fiscal 2002.

Our primary target for fiscal 2002 included high-temperature melting slug (reused as roadbed) and recycling of ceramic-coated PET film.

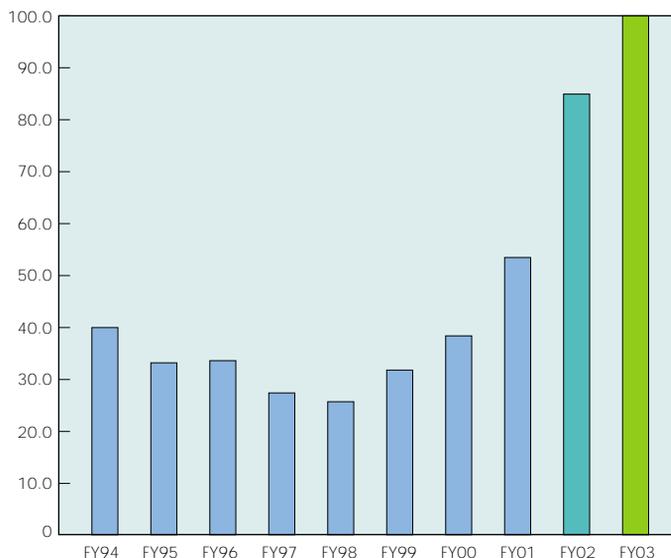
*** Landfill zero**

Represents zero direct landfilling of waste as well as zero landfilling of residual waste and sludge remaining after waste processing (such as incineration and neutralization).

****Waste matter subject to the zero emissions campaign**

Murata's zero emissions and recycling rate targets exclude waste matter that the company is unable to process on its own, such as excess sludge in remediation tanks and general waste designated for processing at a public facility.

Recycling Rate in Japan



Recycling of Uniforms

Murata is promoting the recycling of uniforms used within the Murata Group companies. Because the uniforms are made of 100% polyester, old uniforms are recycled by polyester recycling companies as polyester products (such as uniforms).



Recycling of Films Attaching Ceramics

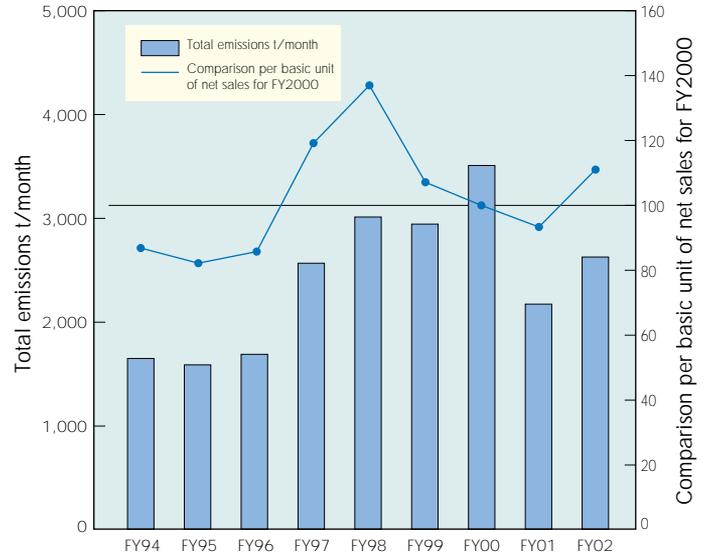
Fukui Murata Manufacturing peels ceramics from PET film coated with ceramics. The peeled PET film is then recycled as the raw material for PET. The recovered ceramic material is recycled for recovery of precious metals and the refining of nonferrous metals. Murata Electronics Singapore (Pte.) Ltd. and other locations also recycle these resources.



Reducing Waste Production

Murata's monthly average total emission of waste in fiscal 2002 was 2,624 metric tons/month in Japan and 382 metric tons/month in other countries. As for our action plan targeting the end of fiscal 2003, we have been implementing a variety of initiatives aiming at a 10% reduction in waste production per basic unit of net sales compared to the level for fiscal 2000. The result for fiscal 2002 was an 11% increase compared to the level for fiscal 2000. The reason for this increase was a significant reduction in the unit price of products as well as a drop in production compared to fiscal 2000 levels. However, we are committed to continued improvement efforts through measure such as reducing waste, decreasing the spoilage rate and increasing the efficiency of material use.

Total emissions of waste per basic unit of net sales compared with results for fiscal 2000 (domestic total)



Composting of Raw Food Waste from Staff Dining Halls

Our Japanese plants with employee dining halls and kitchens generate appreciable amounts of raw food waste. To address this issue, we had completed introducing facilities for composting this raw waste in all 18 plants and subsidiaries (representing a total investment of ¥69 million.)

The raw kitchen waste generated within Murata's domestic operations totals about 200 metric tons annually. As a result of this initiative, however, we have succeeded in reducing this volume to a mere 20 to 40 metric tons. Furthermore, because we compost the remainder, we have been able to discontinue all external disposal of food waste; we now use the resulting compost on company grounds as part of our green landscaping efforts.



Device



Feed food waste



Working compost into soil

Introduction of a Sludge Dryer

Toyama Murata Manufacturing Co., Ltd. has introduced a vacuum sludge dryer to reduce the amount of sludge generated in the drainage process. By reducing the moisture content of the sludge from 70% to 20%, this innovation has effectively reduced the annual sludge output by about 190 metric tons.

