Waste initiatives

Approaching zero emissions

Waste handling involves two problematic issues: landfill sites (typically the final destination for waste), and soil and underground water polluted by harmful substances in the landfill. To deal with these problems, waste must not only be reduced-it must be recycled and reused. From the beginning, ROHM has committed itself to eliminating resources that do not add value to our products. This policy not only increases corporate profits, it also cuts waste. As for inherent waste that is an integral part of our business, ROHM is studying alternatives for reclaiming waste as resources and/or recycling waste for new uses. We are certain that through waste recycling and reuse, inherent waste will be reduced significantly to create a sustainable society.

As an initiative to reduce the amount of waste material generated, we are striving to improve the appropriateness of materials and secondary materials committed as well as yield ratios. There are also cases where the separation of unwanted materials can uncover valuable materials that can be sold. And in order to establish a recycle-based society, material re-usage is imperative. We are working on the important issue of focusing on the reduction of waste materials generated so that unwanted materials no longer become waste materials.

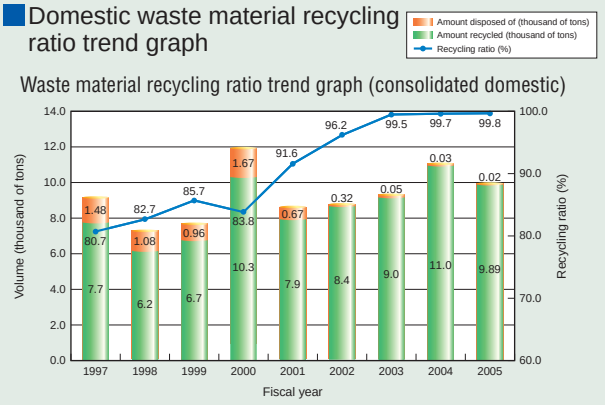
When recycling waste materials, the process must be properly carried out based on the law. In order to implement processing correctly, we make certain to contract with government-approved vendors, issue manifests, leave a processing record and carry out periodic inspections of our vendors' processing plants.

Periodic audit of waste treatment personnel at REPI (Philippines)

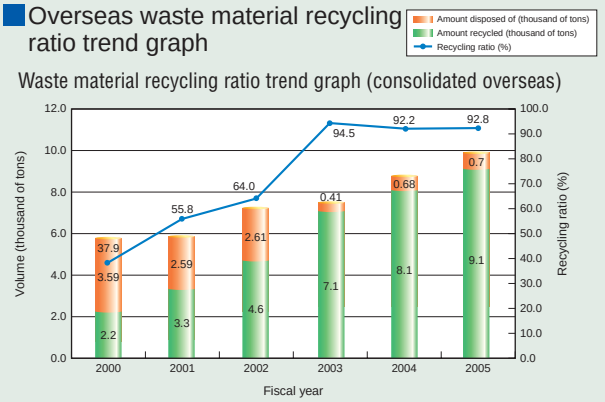
Processing waste material in order to reduce landfill disposal as close to zero as possible is generally known as “zero emissions.” The ROHM Group has been promoting the recycling of waste material with the objective of obtaining zero emissions by 2005 with a recycling rate of 99%. As a result, the Japanese domestic group companies achieved zero emissions by FY 2004. In the future, we will be making initiatives to achieve zero emissions in our overseas production sites as well.

Waste material recycling ratio trend graph

Domestic waste material recycling ratio trend graph

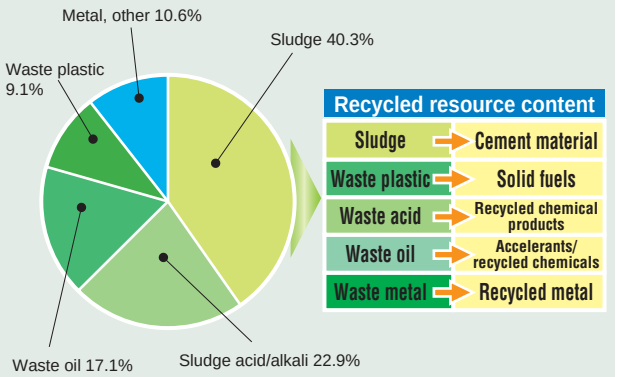


Overseas waste material recycling ratio trend graph



Details of waste material recyc

Breakdown of the quantity of industrial waste materials generated (2005 results)



Waste initiatives

Activities to recycle waste material

The ROHM Group collaborates with special waste-treatment contractors to reclaim unnecessary materials as resources to be re-circulated. Waste discharged from the ROHM Group is treated with optimal methods according to the type of waste.

History of waste disposal at the ROHM Head Office

1990	● Adopted a strict system that collected and sorted waste into 52 categories to promote recycling.
1993	● Recycled calcium-fluoride sludge as cement material in cooperation with cement manufacturers. Calcium-fluoride sludge constituted more than 60% of the total waste by weight from the company. (Formerly, the waste had been disposed of at a landfill site being developed for public use.)
1995	● Worked with waste-management contractors to start production of solid fuel from waste plastics. (Formerly, waste had been disposed of by incineration and landfill.) ● Worked with paper-manufacturing companies to convert used office paper into recycled paper. Bathroom tissue made from the recycled paper is used throughout the company.
1998	● Recycled phosphoric-acid waste, a byproduct from the semiconductor-manufacturing process, for use in other industries.
1999	● Introduced a garbage-disposal unit that decomposes bacteria from the waste produced by the company cafeteria, reducing the amount of waste discharged outside the company.
2000	● Introduced an electronic-measuring system that improves data accuracy and recycling by identifying 75 types of waste to be separated.
2002	● Recovered waste alcohol arising from the semiconductor-manufacturing process and recycled alcohol for use in other industries.
2004	● We have achieved zero emissions at all domestic production sites, starting with Rohm headquarters.

Sludge

Semiconductor production uses large amounts of hydrofluoric acid. Wastewater from the hydrofluoric-acid process is neutralized and flocculated, typically with hydrated lime using in-house wastewater treatment facilities. This results in a large amount of calcium-fluoride sludge. Today, a cement manufacturer uses this sludge as part of its cement material.

Waste oil

Relatively pure wastewater of organic solvents such as acetone isopropyl alcohol is reused in various industries such as material recycling. Wastewater that cannot be reused is recycled to improve combustion in iron foundries and industries such as thermal recycling.

Plastic waste

Plastic waste discharged from ROHM is processed into solid fuel by a contract processor and used to improve combustion in paper manufacturing and iron foundries.

Paper waste

ROHM generates large amounts of paper waste. Paper waste is periodically sent to paper-manufacturing companies and recycled as bathroom tissue and cardboard. The recycled bathroom tissue is used in-house.

Acid waste

Liquid waste from chemicals used in semiconductor production processes are treated and rendered harmless at in-house liquid-waste treatment facilities. When liquid waste is collected, it is classified to ensure the purest liquid waste for reuse. As an example of this material recycling, phosphoric acid waste produced at ROHM is used to raise bacteria for treating liquid waste at paper-manufacturing companies.

Kitchen refuse

It was once common to take kitchen-refuse produced at the employee cafeteria and recycle it as livestock feed. However, there is virtually no such demand today. After much investigation about how to dispose of kitchen-refuse in an environmentally-friendly way, the ROHM Group adopted two methods: biological composting and bacterial biodegradation.

Kitchen-refuse biodegradation facilities at ROHM Head Office