

B-e-2 Overview of the Environmental Impacts: Balancing Environmental Impacts

Material Flow Chart for 2011 to Determine Environmental Impacts

Scope: Domestic production sites

HORIBA, Ltd. head office/factory and Biwako Plant, HORIBA STEC, Co., Ltd. head office/factory and Aso Factory, and HORIBA Advanced Techno Co., Ltd. head office/factory

Environment

IN PUT

Energy	
Electricity	17.24 mil kWh
City gas	677 km ³
Fuel	76 kL
Water	
Service water	76 km ³
Materials	
Metal	914 tons
Glass	1ton
Packaging materials	353 tons
Chemical substances	8 tons
Office paper	23 tons
Liquid gas (LN ₂)	1,343 tons

Electricity	Electricity purchased from an electric power company
City gas	City gas as an energy source
Fuels	Gasoline, diesel and kerosene
Service water	Groundwater and city water
Metal	Production material
Glass	Production material

Business processes



Products	Weight of shipments
CO₂	Carbon dioxide caused by the consumption of energy, such as electricity and gas, and by nonenergy greenhouse gases used for production
Chemical substances	Substances emitted mainly during manufacturing processes
Amount of drainage	Wastewater released into sewers and rivers

Packing materials	Materials for wrapping and packing products
Chemical substances	Substances required for the use, development and manufacturing of products
Office paper	Copy paper used in factories and offices
Liquid gas (LN₂)	Liquid nitrogen used in development and manufacturing processes

Vehicle fuels: Fuels used in truck Transportation

Electricity: Electricity consumed for the use of products

Collection: Post-consumer product collection

Total amount discharged	The total amount of valuable objects, general waste and industrial waste discharged from different divisions
Final amount of landfill waste	The amount of landfill waste discarded after reuse, recycling and intermediate treatment
Recycled materials	Discharged paper, wood and plastics that are recycled

CO₂: Carbon dioxide emitted during the transportation of products

CO₂: Carbon dioxide emitted during the use of products

Reused and recycled: Resale
Disposal: Disposal treatment

OUT PUT

Products	5,673 tons
Emissions to air	
CO ₂	8,879tons
Chemical substances	4tons
Discharge water	
Amount of drainage	76km ³
Waste	
Total amount discharged	418tons
Final amount of landfill waste	8tons
Recycled materials	379tons

Emissions to air	
CO ₂	154 tons

Emissions to air	
CO ₂	4,670tons

Reused, recycled, and disposal	
Reuse and recycling	2tons
Disposal	6tons