



Voluntary Plan

"The environment outlining its plans for environmental conservation (Voluntary Plan)" drawn up in 1993 serves as the guideline for specifically promoting environmental conservation activities. All plants and divisions are continuing their efforts in accordance with the plan.

Achievement of Fiscal 2002 Voluntary Plan

Results for 2002 unfortunately fell short of targets with regards to "reduction of industrial waste" and "Green House Effect prevention". However, "air pollution prevention" targets were successfully cleared. Nitto Denko will continue its effort to attain targets set for "reduction of industrial waste" and "global warming prevention" in 2005.

Targets/achievement

1 To reduce waste

Waste caused in connection with production activities does not only involve waste of resources, but problems with disposal as well. We are working to improve yield and improve production processes with the ultimate goal of reducing industrial waste. At the same time, we are involved in the recycling of industrial waste.

〈Targets for fiscal 2002〉

Recycling rate: 98% or more by the end of fiscal 2002

Value of industrial waste ratio*: 15% in fiscal 2002

Recycling rate: 96.5%, target not achieved

Value of industrial waste ratio: 15.6%, target not achieved

〈Targets for fiscal 2005〉

Recycling rate: Maintain 98% or better from fiscal 2003 to fiscal 2005

Value of industrial waste ratio: 12% in 2005 (5 point reduction against fiscal 2000)

$$\text{*Value of industrial waste ratio} = \frac{\text{Value of industrial waste (material cost and treatment cost of industrial waste)}}{\text{Product amount}} \times 100$$

2 To prevent Green House Effect

CO₂ (carbon dioxide) is increased by burning fossil fuels, thereby causing global warming. We promote energy saving to improve consumption of energy per product unit, and aim for reduction of CO₂ emission.

*Consumption of energy per product unit: Amount of fuel and electric power used converted to crude oil is called "consumption of energy." "Consumption of energy per product unit" is amount of energy used per product unit.

〈Targets for fiscal 2002〉

Consumption of energy per product unit: 460 L/¥1 million by fiscal 2002 (20% improvement over fiscal 1990)

**Consumption of energy per product unit:
532 L/¥1 million, target not achieved**

〈Targets for fiscal 2005〉

Consumption of energy per product unit:

460 L/¥1 million by fiscal 2005 (20% improvement over fiscal 1990)

〈Targets for fiscal 2010〉

Consumption of energy per product unit:

430 L/¥1 million by fiscal 2010 (25% improvement over fiscal 1990)

3 For prevention of air pollution

A lot of organic solvents are used for manufacturing adhesive tape, which is our mainstay business. When organic solvents volatilize into the atmosphere they cause photochemical oxidants and are also said to be a remote cause of acid rain and global warming. We are actively involved in reducing the amount of organic solvents released into the atmosphere.

〈Targets for fiscal 2002〉

Organic solvent emission volume: 280 tons/month (50% reduction against fiscal 1998)

Organic solvent emission volume:

167 tons/month, target successfully cleared

(Effect of new deodorizing furnaces at Toyohashi and Tohoku plants)

〈Targets for fiscal 2005〉

Organic solvent emission volume: 100 tons/month by fiscal 2005

〈Targets for fiscal 2010〉

Organic solvent emission volume: 80 tons/month by fiscal 2010

4 International standards for environmental protection

We have obtained ISO 14001 certification, which as an international standard for environmental conservation, at our all plants in Japan and three overseas plants. We are also working on obtaining certification for the entire Nitto Denko Group, and are working on reducing environmental load based on an environmental management system.

Our domestic production bases are continuing to improve environmental management by applying ISO 14001 and are working on introducing (obtaining and continuing certification) of ISO 14001 at our overseas manufacturing bases as well.

ISO certifications acquired

Nitto Denko Australia: March 2003

Fiscal 2003 ... Acquisition is planned for Nitto Europe N.V. and Nitto Philippines.

5 Aiming for global activities

All Nitto Denko Group companies are working for environmental conservation continuously.

We are carrying out environmental conservation based on "10 environmental matters to be considered for overseas business expansion" indicated by the Federation of Economic Organization, Japan in the "Global Environment Charter."

Expanded environmental accounting scope to 7 group companies overseas.

Fiscal 2003 ... It is planned to hold a Nitto Denko Group environmental meeting.