

# Nitto Denko Group's Relationship with the Environment

## Business Characteristics and Main Environmental Load

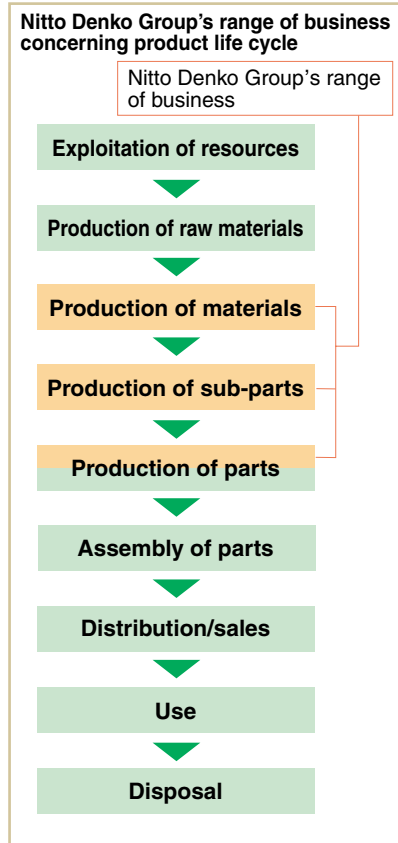
The Nitto Denko Group provides products throughout the world by producing materials and sub-parts used in cars, housing, home electronics, OA equipment and IT through technologies for applying, processing and synthesizing high polymer materials. The impact of the Nitto Denko Group's business activities on the environment includes the following: (1) Oil resources account for much of the production resources, (2) Materials and sub-parts are fated to dispose when end products are no longer necessary, (3) the tape manufacturing process, which is one of the mainstay businesses, uses a lot of organic solvents.

### Produces adhesive tape, materials and parts. -The Nitto Denko Group's products

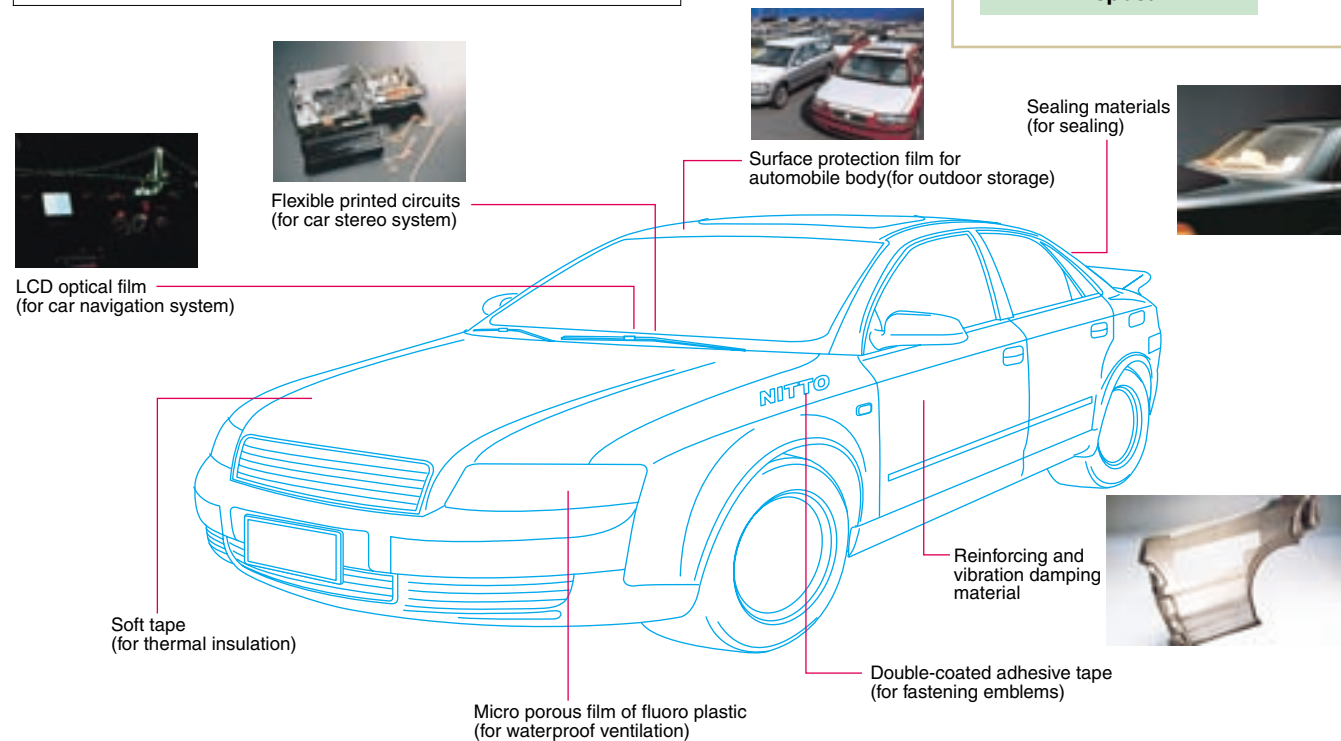
Beginning with electronic component materials and adhesive tape, the Nitto Denko Group's products are used for various applications including for example optical film for car navigation systems, flexible printed circuits for car stereo systems and double coated adhesive tape for fastening emblems for the field of automobiles for which performance is constantly improving. Our sealing material and reinforcing and vibration damping materials with flame and weather resist ance that contribute to reducing body weight and improving fuel efficiency and comfort are used in many places.

### Size of environmental load is a problem when manufacturing. -Environmental aspects of product

The Nitto Denko Group produces sub-parts and materials for parts makers and assemblers. We offer custom machining to respond to various customer demands. Loss of energy and materials occurs as a result. At the current point in time, that is the cause of environmental load generated by the Nitto Denko Group's business activities. Reduction of environmental load when manufacturing is a theme for the Nitto Denko Group.



### Main products of Nitto Denko Group for supporting comfort and function of automobiles



### Prevention of air pollution, energy savings and reduction of waste are main themes. -Environmental themes of the Nitto Denko Group

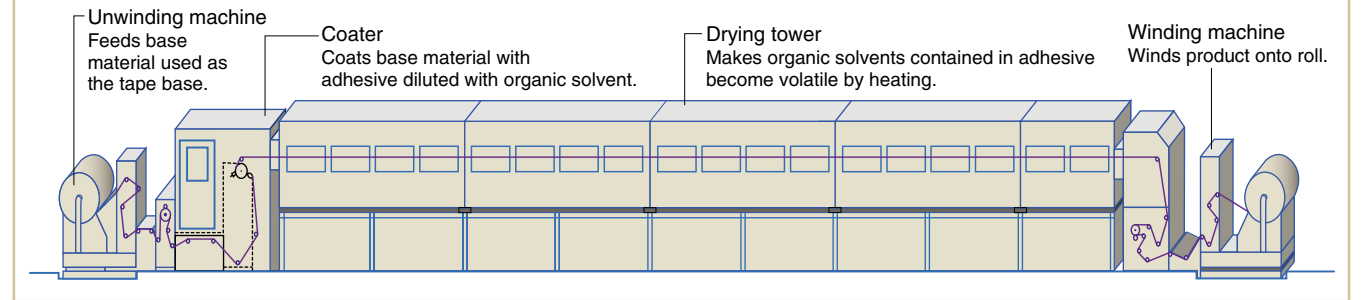
The manufacturing process for adhesive tape, which is one of the mainstay businesses of the Nitto Denko Group, is as follows. The environmental load of this process always includes organic

solvents. Organic solvents are used to dilute adhesive for uniform application on base material. The solvents are made volatile by the closed-type drying tower after coating, and are processed by the solvent recovery unit and deodorizing unit. The drying tower, solvent recovery unit and deodorizer consume a large quantity of energy and discharge CO<sub>2</sub>. Leftover portions of products cut to the size which reproducts that do not pass the inspection test are disposed of as waste. Reducing this waste is also

an important theme for environmental activities.

Detailed contents of environmental efforts for business activities are given on pages 9-14.

### Manufacturing process of adhesive tape



### Promotes environment-conscious products according to needs. -Efforts with product development

Environmental EU directives and related laws for promoting formation of a recycling society have been implemented, and as customers become more interested in environment-consciousness of products, the Nitto Denko Group defines environment-conscious products from four points of view in order to develop and expand. When developing individual products, before starting and when shifting to production (2 times), environment-consciousness is quantitatively assessed in accordance with 8 standards for assessing environment-consciousness of products. While adopting the concept of LCA, we aim to reduce environmental load of products and improve resource productivity.

Main examples of environment-conscious products are given on page 7.

### Structure of environment-conscious product assessment

	Existing product	Primary	Secondary
Volume reduction	2	2.2	2.3
Longer life	2	3	4
Able to be recycled	2	3	4
Easy disassembly	2	2	2
Easy treatment/disposal	2	2.8	3
Contributes to environmental conservation	2	3	3.3
Saves energy	2	3	5
Provides information	2	2	2
Average points	2	2.6	3.2

Each item is assessed with a perfect score of 5 points, with the existing product being 2 points. Any product with 2 or points for any item, or a total average of 2.5 points or more is certified as an environment-conscious product. The assessment is carried out in 2 stages, primary (before starting development) and secondary (when shifting to production).

### Definition of and assessment standards for environment-conscious products

