

Efforts for Environmental Conservation



Recycling and Waste Reduction Activities

We consider recycling and waste reduction activities as important in creating a resource recycling society, and promote those activities proactively. At present recycling of automobiles and parts is being regulated internationally at a fast pace. In the European Union (EU), the End-of-life Vehicle (ELV) Directive has been implemented, while in Japan the Automobile Recycling Law has been enacted and is to take full effect in 2005. We are making proactive efforts to develop ELV recycling technologies, considering it a social responsibility of a specialized manufacturer in the high-polymer sector.

We also devise less environmentally damaging recycling methods and take measures to (1) reduce the source, (2) recycle (recycle to use as raw materials) and (3) reuse (resell and/or reuse as raw materials and fuel in other lines of business) as the three pillars of activities for zero emissions. Consequently, we successfully achieved zero landfill waste at all Toyoda Gosei plants and offices in December 2002, more than one year ahead of schedule. We will maintain zero landfill waste and further promote the actions throughout the TG Group.

●ELV Recycling Activity

We consider following two actions the most important and therefore promote them: (1) to develop plastic and rubber products compliant with the EU's ELV Directive that specifies a 95% effective vehicle recycling rate (2015) in order to reduce shredder dust (ELV waste shredded and land filled), and (2) to develop plastic and rubber products compliant with the development of automobiles

with environmentally damaging substances conforming to safety standards in order to reduce the use of those substances. In concrete terms, we promote these actions independently for automobiles already on sale and for new model automobiles. To achieve a 95% effective vehicle recycling rate, in particular, we are focusing on the recycling design of new parts for new model automobiles.

Recycling of automobile parts for cars already on sale

ELV recycling project	To test ELV recycling technologies and consider their prospective application, taking the EU's ELV Directive and the domestic Automobile Recycling Law into account.
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Cases of prospective application of ELV recycling

- Wheel caps ————— (1) wheel caps (core material), (2) blast furnace reducing agent
- Door glass runs ————— (1) plug holes, (2) grommets, (3) elastic paving
- Door weather strips — (1) sunroof drain hoses, (2) rubber mats

Recycling of automobile parts for new model cars

Important items	Measures	Cases of efforts
1. Product designing for high recyclability	<ul style="list-style-type: none"> • Change to easy-to-recycle materials and structures • Designing of easier-to-scrap products 	No inserted metals, paint-free, complete use of olefin, development of post-PVC materials, and non-chlorine rubber materials, etc.
2. Development of new recycling technologies	<ul style="list-style-type: none"> • New reclaim treatment technology • Separating technology of complex materials 	Use of ethylene propylene diene (EPDM) recycled rubber (continuous extrusion desulfurization methods), recycling of three-layer instrument panel epidermis (hydrocyclone, etc.)
3. Loading vehicles with recycled materials	<ul style="list-style-type: none"> • Development of usage of recycled materials • ELV parts recycling technology 	Recycling of discards of ground fabric for airbags (engine covers, nylon piles), recycled polyethylene terephthalate (PET) noise-absorbing materials, recycled PET engine covers
4. Reduction of substances with environmental impacts	<ul style="list-style-type: none"> • Compliance with laws, voluntary reductions 	Reduction of lead compounds, PVC, hexavalent chromium, and environmental endocrine disrupters, etc.

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●Waste Reduction Activities

In December 2002, we successfully achieved zero landfill waste at all plants and offices more than one year ahead of schedule, which was the end of fiscal 2004. Our efforts toward zero landfill waste had been advanced by mainly focusing on the Third Environmental Action Plan based on the three pillars: (1) measures to reduce the source, (2) recycling and (3) reuse. Consequently, the Bisai plant, our model plant, achieved zero landfill waste for the first time in December 2002 as a plant of the member company of Japan Rubber Manufacturers Association. The measure taken at the Bisai plant (e.g., recycling waste plastic into plastic fuel) was horizontally developed while the channel for reusing halogen rubber and plastic was explored and trash separation was ensured by all employees, which together contributed to zero landfill waste at all Toyoda Gosei offices. We continue to advance the activities to maintain zero landfill waste. In addition, in order to achieve zero landfill waste in the eight domestic affiliated companies by the end of the fiscal 2006, we will engage in waste reduction activities in cooperation with each member of the TG Group.



Lay-down bay for recyclable items

Recycling of airbags

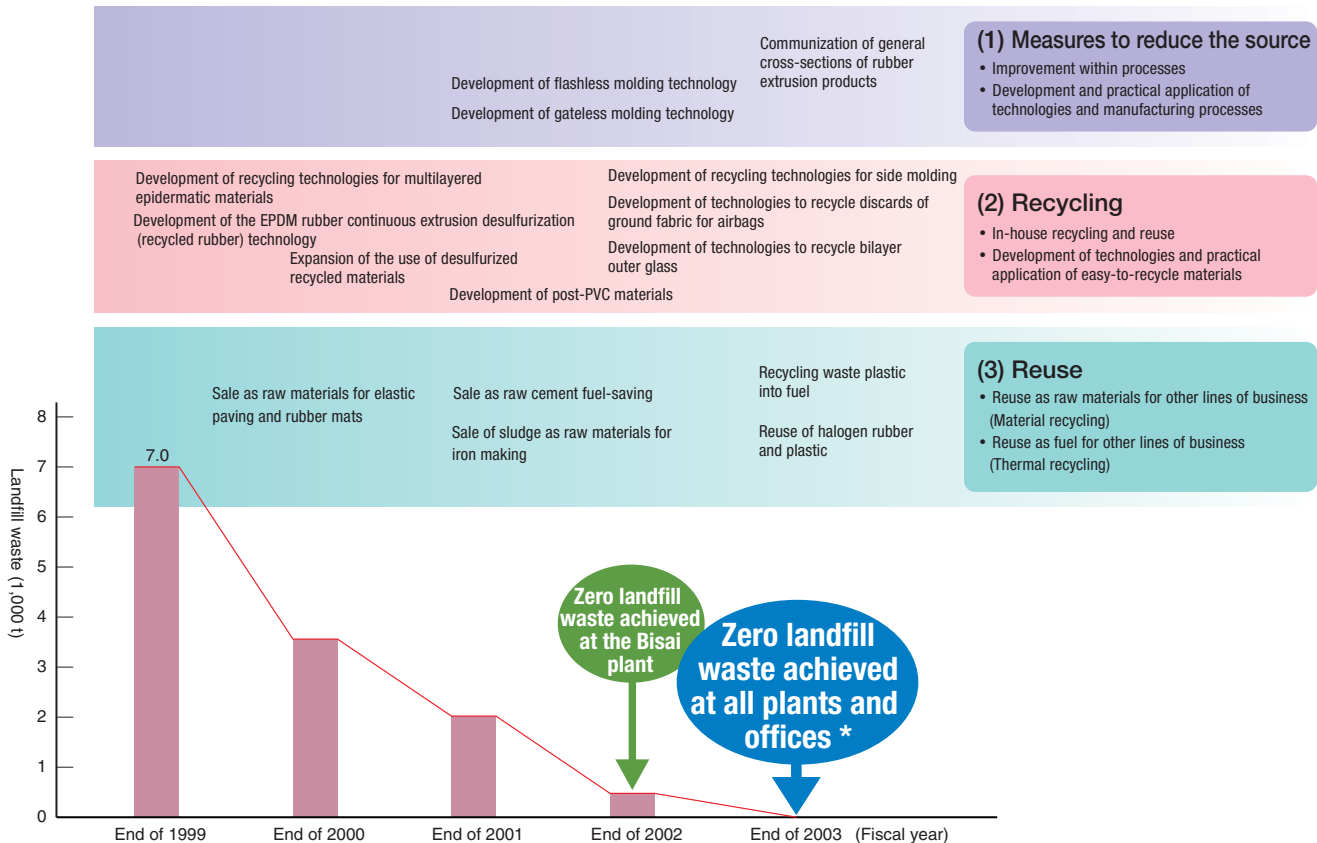


Dismantling airbags



Dismantled airbag for recycling

●Change in Landfill Waste and Cases of Measurements



* Effort level of zero landfill waste: less than 1% compared to the fiscal 1999