Global Environmental Conservation

Development and Provision of Environmentally Considered Products

Designing environmentally conscious products

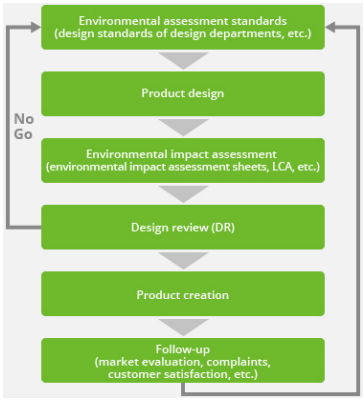
The GS Yuasa Group's products have some impact on the environment during every stage of the product life cycle, from procurement and manufacturing to transportation, use and disposal. In order to reduce the environmental burden throughout the product life-cycle caused by the consumption of resources and the generation of greenhouse gases and waste, the Group is committed to improving the product performance through designing that considers selection of raw materials, ease of disassembly and segregation, energy conservation, and appropriate labelling.

For an environmental assessment of product design, design departments employ design standards and then evaluate the suitability of products in design review (DR) meetings based on environmental impact assessments of every stage of the product life cycle. When environmental impact standards are not met, we review the design standards and redesign the product. We use the expertise of several departments in addition to design departments, including engineering, marketing, procurement, quality and the environment, to make sure that the results of Design for the Environment (DfE) are communicated widely, which also maximizes their effectiveness.

Environmental Assessment Items

1. Energy conservation
2. Volume reduction
3. Recyclability
4. Ease of disassembly
5. Ease of separation processing
6. Safety and environmental conservation
7. Material selection
8. Ease of maintenance
9. Energy efficiency
10. Reusability (life extension)

Flow of Environmental Assessment



Reflecting information in the products we distribute

Important information, such as customer requirements for GS Yuasa Group products, is used when we change the design of existing products or design new products. This helps boost the value of our Design for the Environment. Information from interested parties related to after-sales service, returns and complaints are used as a valuable resource to improve the environmental performance of products.

Management of chemical substances contained in products

The GS Yuasa Group takes steps to provide products with minimal environmental burden based on the Chemical Substance Management Guidelines, which clarify the standards for chemical substances in products. These guidelines are part of initiatives to examine chemical substances contained in materials delivered as stipulated in the GS Yuasa Group green procurement criteria. With these guidelines, we classify chemicals contained in our main materials, as well as the secondary materials and the parts used in the products that the Group makes and sells as either prohibited substances or managed substances. The GS Yuasa Group works with our suppliers who supply main materials, auxiliary materials and components to identify and definitively manage the substances covered by the guidelines to raise the environmental quality of our products.

Popularizing environmentally considered products

The GS Yuasa Group defines environmentally considered products as those products that help mitigate global warming, and we are actively working to develop and popularize such products. We incorporate into the Group's Mid-Term Management Plan sales targets for environmentally considered products, making it part of our business strategy to work on climate change through the products we provide to customers.

Refer here for data on the percentage change of environmentally considered products in total sales of all products (https://www.gs-yuasa.com/en/csr/env_performance.php#tag_h32)

Examples of Environmentally Considered Products

Item	Description	Examples of products
Batteries for vehicles with start-stop systems	Batteries for vehicles with start-stop systems (ISS) for improving gas mileage by allowing the engine to stop instead of idling to reduce fuel consumption	
Storage battery system	A system to effectively utilize renewable energy (power conditioners, lithium-ion battery, etc.)	 
Automotive Lithium-ion Batteries	Hybrid vehicle batteries and electric vehicle batteries that contribute significantly to reducing greenhouse gases	 

*Click image to enlarge

Increasing Usage Rate of Recycled Lead in Products

The GS Yuasa Group is working to increase the usage rate of recycled lead—the primary material used in lead-acid batteries, one of our core products. We take action to work toward a recycling-oriented society as part of our business strategy by incorporating into the Group's Mid-Term Management Plan targets for the usage rate of recycled lead contained in our lead-acid batteries.

The GS Yuasa Group has been taking action to recycle our post-use products by building and operating a recycling system based on extended producer responsibility (EPR). Going forward, we also plan to strengthen our efforts to promote the use of recycled materials in our products.

Refer here for data on changes in the ratio of recycled lead used as raw material in lead-acid batteries (https://www.gs-yuasa.com/en/csr/env_performance.php#tag_h33)