

E Initiatives to Reduce Environmental Impact- 2

Initiatives in Purchasing



Akebono is working to reduce its environmental and social impact with the cooperation of its suppliers.

Green Purchasing

Akebono introduced its Green Purchasing Guideline in 2005, revising it in 2011. Under the guideline we are considering the environment and CSR from the purchasing stage by working together with suppliers to procure materials, components, and secondary materials that have a low environmental impact. We are also encouraging our suppliers to improve their environmental management performance by recommending activities to acquire external accreditation such as ISO 14001. Going forward, our next challenge is to promote these practices at overseas bases as well.

Green Purchasing

Green purchasing refers to the preferential selection and acquisition of products that cause less negative environmental impact. The scope of products covers materials, secondary materials, office supplies and equipment used in the course of manufacturing. Manufacture of "Green Products" requires the practice of green purchasing.

Ranking and Management of Environmental Impact Substances under Green Purchasing Guidelines

Targeted chemical substances are categorized into three ranks and controlled as follows:

Rank	Chemical substances	Examples of control measures
Usage prohibited	Substances that are strictly banned from use and production by law and regulation	Prohibit use/draw up plans for abolishment if there is substance in use
Usage restricted	Substances which are projected to come under legal regulation and substances for which emission regulations are set under existing laws	Conduct research on alternative materials or reduction methods and draw up reduction plan
Proper management of usage information required	Substances listed in GADSL that is, substances requiring declaration of usage amount	Ensure proper management of usage information and work toward reduction of usage

Response to Substances of Very High Concern

In cooperation with our suppliers, Akebono performs testing of purchased products to determine if they contain substances of very high concern (SVHC*) or banned substances. The tests are performed on the individual product level and their results are communicated back to the suppliers. We are also promoting labeling of purchased items in line with laws and regulations.

Substances of Very High Concern

A substance may (but not necessarily must) be designated as SVHC if it meets one or more of the following criteria: it is carcinogenic, mutagenic or toxic for reproduction, and in addition is either persistent, bioaccumulative and toxic, or very persistent and very bioaccumulative. Such substances are identified as having probability of causing serious adverse effects to human health or the environment.

E Initiatives to Reduce Environmental Impact- 3

Initiatives in Production



Akebono is reducing the environmental impact of its production sites and lowering the power consumption of its production facilities

Introduction of Wastewater Treatment and Air Purification Systems

Akebono has introduced wastewater treatment and air purification systems and is carrying out environment-friendly production activities.

Iwatsuki Manufacturing upgraded its wastewater treatment system and cleared wastewater standards by a wide margin in fiscal 2017. In fiscal 2018, Akebono plans to introduce a system in Guangzhou, China that reduces total wastewater volume and expects it to meet the standard for heavy metal content in wastewater.

In China, where air pollution is a growing problem, industrial zones in each area apply voluntary standards. In Suzhou, we established a new air cleaning system that uses an electrostatic precipitator and low temperature plasma treatment* and applied voluntary standards that exceed those of the law and regulations. This air cleaning system also helps to deodorize the air.



View of the Suzhou air purification system



Partial view of the Suzhou air purification system

* **Low temperature plasma treatment:** Low temperature plasma is air that has around 1% plasmarized (separated into positive ions and electrons) so that it contains plasma ions at room temperature (a few degrees Celsius) and is able to dissolve organic matter.

Developing Young Engineers to Design Environmentally Considerate Facilities

Akebono is looking to develop engineers who will design the facilities of the future by conducting a program for "building a miniature production line for brake manufacturing processes that can be operated by a single motor." Under the program, a team of young engineers who are within the first five years of their assignment to the production engineering division undertake "miniature line building" concurrently with their ordinary work, undertaking all steps from planning and design to production.

This initiative has been carried out since fiscal 2010. In fiscal 2017, six junior associates produced a miniature manufacturing facility for high performance calipers. The original facility was installed in Hanyu and is the manufacturing facility for producing aluminum opposed type disc brakes for European manufacturers.