

RESEARCH AND DEVELOPMENT (R&D)

The Bridgestone Group mission of “Serving society with superior quality” mandates an unending quest to create higher-value-added products worldwide to fulfill diverse social requirements and market needs. The Bridgestone Group conducts R&D activities with the objective of establishing a business model that promotes strong global competitiveness, which in turn facilitates precise responses to a business environment undergoing major structural change. A key challenge is to stay at the forefront of technology in each business domain in order to achieve the goals of the MTP announced in October 2007. From the development of new materials, products, and service technologies to future-focused fundamental and production technologies, the Bridgestone Group advances R&D efforts in diverse and far-reaching fields. Activities also focus on contributing to development in the “package solutions business” from a technological standpoint in order to provide more than products alone.

TIRES

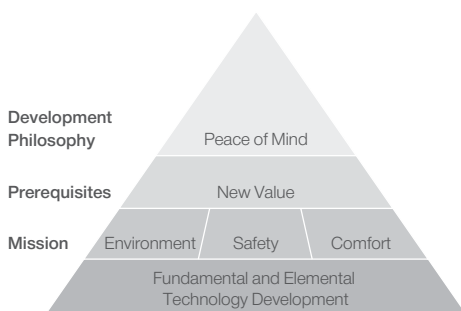
R&D programs in the tire segment share the fundamental aim of creating tires that deliver ever higher added value. Besides seeking performance gains such as increased grip or durability, the Bridgestone Group also strives to develop tires that continue to enhance driver safety and provide more comfort. Reduced environmental impact is another key goal. R&D activities aim to further reinforce this domain as a core strategic product group and business.

With regard to minimizing the environmental burden, the Bridgestone Group strives to develop eco-friendly tires that fulfill

voluntary standards in various areas, such as global warming, resource conservation, using environment-friendly resources, recycling, reducing noise, and enhancing safety. The Group’s ECOPIA line of eco-friendly tires features reduced rolling resistance balanced with other characteristics. This was achieved in part through the use of NanoPro-Tech (Nanostructure-Oriented Properties Control Technology), a proprietary materials technology. In tires for passenger cars, we have launched the ECOPIA EP100, and the ECOPIA EP25 has been selected as original equipment for Toyota Motor Corporation’s iQ super-compact car. In bus tires, meanwhile, we have launched the ECOPIA R221 II. In the future, we will continue to aggressively enhance our lineup of ECOPIA tires, pursue global development, and promote their use as original equipment.

Furthermore, as a new business model utilizing retread tires, we are developing Eco Value Pack, which contributes to environmental conservation through reduced resource consumption, energy usage, and CO₂ emissions. By combining new and retread tires for trucks and buses with tire maintenance that helps customers to make the best use of those tires, we can achieve increases in total tire life. A comprehensive range of high-quality products and services enables us to simultaneously contribute to customer tire-related cost management and environmental conservation. To expand Eco Value Pack, we have drawn on the technical capabilities of the former Bandag, Incorporated, which has been acquired by the Group. In Japan, we have launched the first Bandag Retread Factory, which offers integrated manufacturing, sales, and service for retreads at locations near the customer.

Development Scheme



ECOPIA EP25: ECOPIA EP25 employs a compound that applies NanoPro-Tech, Bridgestone’s proprietary materials technology.

The Group has positioned runflat tires as strategic products. We are actively working to promote the further use of runflats, which continue to function safely at a specified speed for a specified mileage even after a loss of air pressure. In addition, because runflat tires eliminate the need for a spare tire (emergency-use tire), they help to conserve resources and support improved fuel efficiency through reduced vehicle weight. Bridgestone's runflats offer both advanced runflat features (post-puncture durability) and advanced handling and ride features, and our plants have shipped more than 10 million units of these tires.

In aircraft radials, meanwhile, our original new-construction tires support improved safety and lower fuel costs, and they have been highly evaluated for their enhanced characteristics. In 2007, they were selected for installation on the state-of-the-art Airbus A380 wide-body aircraft, and subsequently they were selected for installation on Boeing 777-300ER aircraft operated by the ANA Group. Through the use of cords with high elastic modulus and strength, these tires can offer not only enhanced safety but also enhanced abrasion resistance, which allows for more takeoff and landing cycles between tire replacement, and reduced tire weight, which results in better fuel efficiency.

DIVERSIFIED PRODUCTS

In the diversified products segment, R&D activities are directed toward strengthening product groups positioned as "concentration" businesses and toward providing products that can accurately meet rapidly changing needs and ensure customer satisfaction.

In chemical and industrial products, we have opened a new testing and development center on the grounds of the Yokohama Plant, which is the main plant for these products. Moving forward, we will take steps to consolidate testing and development functions for chemical and industrial products, speed up product development, and strengthen our ability to respond to markets and customers.

In the field of high-performance films, adhesive films for solar modules are one of our "concentration" products. These films utilize our original technologies, and their quality is highly regarded in the marketplace. Demand for solar modules, which offer a power generation system that is clean and eco-friendly, is growing rapidly in markets around the world. The Bridgestone Group is working to further enhance the capabilities of these products and at the same time to aggressively increase its production capacity and contribute to the increased utilization of clean energy.

In electronic paper, meanwhile, we plan to make further progress in verification testing of electronic shelf tags and to commence full-scale commercialization initiatives beginning in 2009. A key characteristic of electronic paper is that it does not require electrical power to maintain an image, so in addition to reducing resource consumption when used in place of paper, it also contributes to energy savings. Moving forward, we will take steps to cultivate demand for this promising product.



Bandag Retread Factory: To promote Eco Value Pack, Bridgestone plans to open about 20 Bandag Retread Factory locations in Japan over the next few years.



A New Testing and Development Center in Yokohama Plant: This facility focuses on experimental performance tests in the development of chemical and industrial products.



Electronic Shelf Tags: Our electronic paper display modules can read bar codes and QR codes, and they can display a wide range of information.