

## Feature: Driving the Future of Eco-Friendly Tires

With the aim of achieving its Long-Term Vision, the Sumitomo Rubber Group is pursuing corporate value from two approaches: economic and social. As a part of its quest for social value, Sumitomo Rubber Industries proactively engages in the development of environmentally friendly products such as fuel-efficient tires.

### The Key to Developing Eco-Friendly Products: Reduction of Rolling Resistance

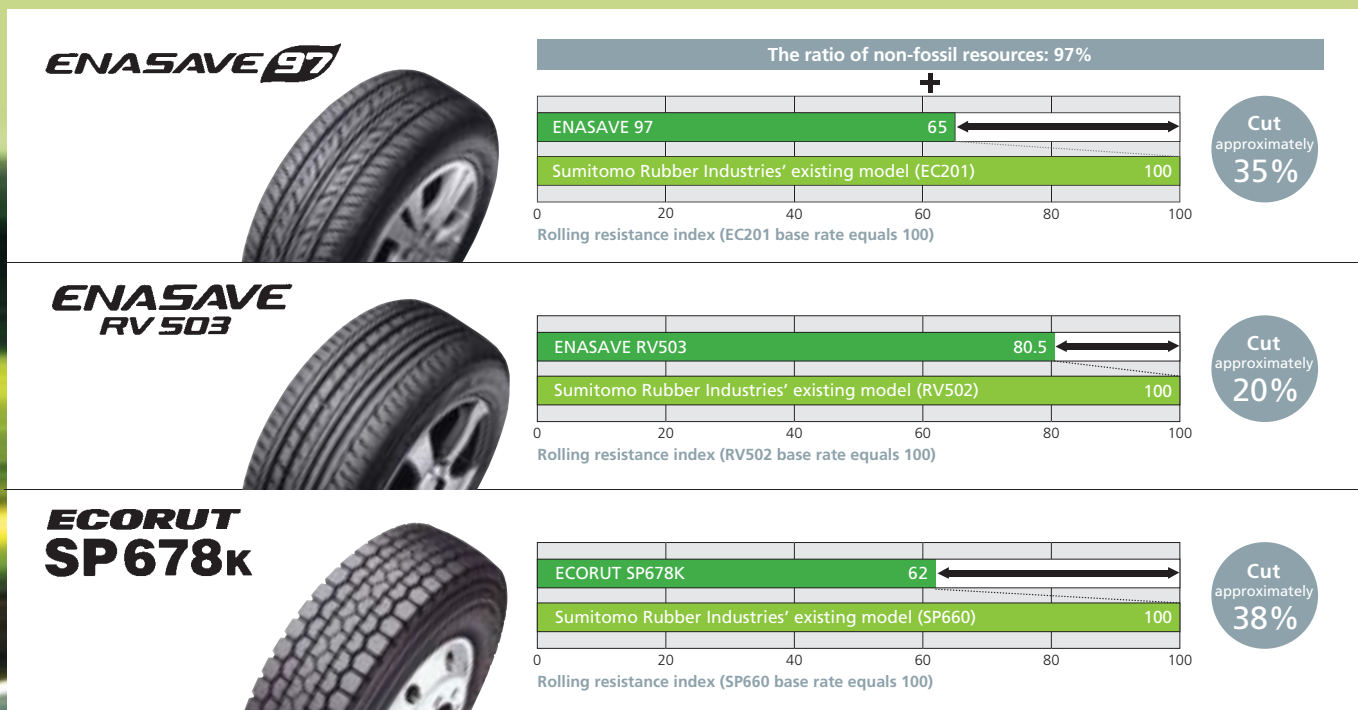
What the tire can do to help address worldwide environmental issues is to have its rolling resistance reduced. Based on this conviction, Sumitomo Rubber Industries set the reduction of rolling resistance as its top priority in tire product development and strengthened its efforts in this area.

The ENASAVE 97 tire launched in 2008 is an all-new eco-friendly tire that raises the content of non-fossil resources to 97%, while reducing its rolling resistance by approximately 35% compared with conventional tires. As a result, the ENASAVE 97 tire can lower automobile fuel consumption by approximately 7%. This feature can significantly cut CO<sub>2</sub> emissions in the use of tires.

The Company is planning to develop fuel-efficient products based on the modified natural rubber technology cultivated in

the ENASAVE 97 tire as well as through new expertise such as polymer technology, and it will introduce these new products over the next few years. By doing so, Sumitomo Rubber Industries aims to reinforce its position in this sector. As part of the first stage of new product introduction, the Company developed the ENASAVE RV503 fuel-efficient tire for minivans and commenced sales in February 2009. The ENASAVE RV503 tire successfully reduces around 20% of the rolling resistance compared with the existing products.

Furthermore, Sumitomo Rubber Industries reduced rolling resistance by approximately 38% in the ECORUT SP678K tire for trucks and buses, released in 2007. This new tire was developed based on rubber compounding simulation technology that analyzes the inner physical mechanisms of rubber on the nano-level.



## Introduction of the Sumitomo Rubber Industries Eco-Friendly Product Standards

Aiming to further contribute to the global environment, Sumitomo Rubber Industries introduced its own standards in 2008 for the development of eco-friendly performance in tires. All of the Company's flagship tires for the domestic replacement market will fulfill these standards by 2015. For overseas replacement markets, the Company plans to release fuel-efficient tires that meet the in-house standards from 2010.



### Top-Priority Development Projects

Based on its standards for environmentally conscious products, Sumitomo Rubber Industries is promoting the development of various eco-friendly tires. Among a number of development projects, the Company places particular emphasis on a tire that is 100% free of fossil resources and a fuel-efficient tire with a 50% reduction of rolling resistance.

#### Tires 100% Free of Fossil Resources

The challenge for the ENASAVE 97 tire is how to convert the remaining 3% of fossil resources into natural ingredients. It is difficult to replace such materials as rubber antioxidants and vulcanization accelerators with natural components using the current technology. Sumitomo Rubber Industries believes it can accomplish this conversion by promoting its R&D activities for biomass materials as well as by leveraging its biotechnology know-how. When tires that are 100% free of fossil resources are realized, the Company can offer an ultimate eco-tire that minimizes environmental burdens both in terms of materials and fuel efficiency. Overcoming various technical issues, Sumitomo Rubber Industries will aim to launch the product in 2013.

## Sumitomo Rubber Industries Eco-Friendly Product Standards

	Eco-Friendly Items	Appraisal Items
When Manufactured / Disposed	Non-fossil resources	Ratio of non-fossil resources
	Resource conservation	Coefficient reduction (Lighter weight, anti-wear performance)
	Recycling / Reuse	Retreading
When in Use	Fuel economy	Rolling resistance value
	Safe and comfortable	Noise, braking, performance on icy roads

#### Fuel-Efficient Tires with 50% Reduction of Rolling Resistance

The EU commission is planning to introduce to its member countries a new requirement to be implemented by 2010. The new regulation will set a corporate average CO<sub>2</sub> emission limit per vehicle to 130g per kilometer. When fuel-efficient tires with a 50% reduction of rolling resistance are developed, they can enhance fuel efficiency by approximately 10% compared with conventional tires. Such features have attracted the attention of original equipment manufacturers, and Sumitomo Rubber Industries is frequently receiving requests for early commercialization. To this end, the Company will address the issues and challenges of the technical aspects and production process by amalgamating its technological capabilities across the board so that it can commercialize the tire by 2015.

Having inherited the pioneering spirit of J.B. Dunlop, the inventor of the world's first pneumatic tire in 1888, Sumitomo Rubber Industries will boldly take on the challenge of developing tires that can contribute to global environmental preservation.

## Establishment of Tyre Technical Center

Sumitomo Rubber Industries is building the Tyre Technical Center as part of its 100th anniversary project. This facility will utilize "clean energy" generated by natural energies such as wind power, solar power and biomass that can contribute to CO<sub>2</sub> emissions reduction. In addition, the Company is aiming to upgrade the eco-friendly aspects of its facilities by installing solar power generators. Upon the completion of construction, Sumitomo Rubber Industries will accelerate the development of next-generation, eco-friendly products such as tires that are 100% free of fossil resources and fuel-efficient tires featuring a 50% reduction of rolling resistance.



Artist's rendition of the Tyre Technical Center