

Pursuing Greater Mileage



A prototype tire with 50% less rolling resistance

In its pursuit of improved fuel efficiency, Sumitomo Rubber Industries is developing ENASAVE series tires with lower rolling resistance as well as other fuel-efficient tires.

For Release in 2014: A Product Delivering a 10% Improvement in Fuel Efficiency

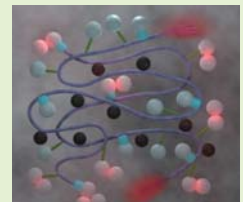
In 2014, the Company plans to release a tire with 50% less rolling resistance* and thus enhanced fuel efficiency. Approximately 20% of the resistive force a moving car encounters has been attributed to the rolling resistance of its tires. By our calculations, this product will yield around 10% improvement in fuel efficiency compared with conventional products.

Leveraging its 4D NANO DESIGN new material development technology to create this tire, the Company adopted such materials as Ultra Pure Natural Rubber (UPNR), a highly purified form of rubber that maximizes its natural potential, and Modified S-SBR, which optimizes rubber molecules at the nano level.

* Comparison with Dunlop brand summer tires sold in 2008 on the replacement market

Modified S-SBR

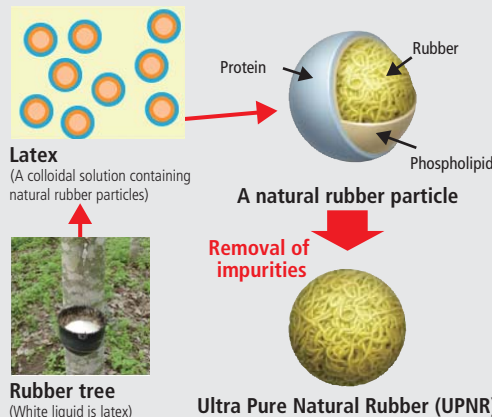
Modified S-SBR was developed by optimizing rubber molecules at the nano level to achieve superiority in terms of both fuel efficiency and gripping performance. This material consistently generates less heat during driving to curb rolling resistance. On the other hand, it produces the optimal amount of heat when brakes are applied, thus realizing excellent gripping performance.



Molecular Structure of Modified S-SBR

Ultra Pure Natural Rubber (UPNR)

With such impurities as proteins and phospholipids that occur in natural rubber removed, UPNR realizes stronger surface bonding between natural rubber and carbon black, which, in turn, suppresses unnecessary heat production and helps reduce rolling resistance significantly.



Analysis using 4D NANO DESIGN

Effects of removing impurities from natural rubber

- Frees it to realize its full potential at the molecular level
- Enhances interaction with carbon black

Principal effects of impurity removal on performance

- A lower heat-generation profile (Improved fuel efficiency)
- Higher durability (Greater resistance against chipping, cracking and wearing)