Reducing rolling resistance

Car makers are striving to get their vehicles to use less energy and emit less CO2 by streamlining chassis and bodywork, and developing hybrid engines and smart materials. They also recognize that tires play a key role.

But the rolling resistance of tires is responsible for 20 percent of fuel consumption, and it essential to reduce it.

Meeting regulatory demands

Places such as Japan, Europe, U.S., Korea and Brazil have enacted, or are in the process of developing, new regulations requiring labels for tires. These labeling requirements vary by country, but generally will give consumers information on safety performance, wet traction, durability, environmental performance, fuel consumption and external noise.

Achieving these new required minimums, demands a technological change, which is now made possible by highly dispersible silica.

Overcoming challenges

Solvay helps its partners address challenges — the rising cost of raw materials, sharply increasing demand, new regulations, production rationalization — with innovative solutions that improve productivity.

Precipitated silica, an amorphous mineral substance, lies at the heart of Solvay silica technology. From its fabrication to its integration into your production process to its use in tires, precipitated silica presents a strong sustainability profile.

It is classified as a harmless product under European and United States standards.

Multiple benefits in tires

Solvay Highly Dispersible Silica (HDS) reinforces tires by replacing carbon black in tire treads. Unlike conventional silica, it reduces rolling resistance and improves traction on wet surfaces without compromising wear.
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Solvay Silica Technology: innovation and technical solutions for sustainable mobility
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25% less rolling resistance
7% less fuel consumption
7% less CO2 emissions
10% less wet braking distance
10% more grip in snow

www.solvay.com
Zeosil® Premium: less resistance, more performance

A highly dispersible silica developed and patented by Solvay, Zeosil® Premium is a micropearl silica that is fluid, dense and dust free. This form allows:

- Improved health, safety and environment conditions
- Easy handling from silos to formulation workshops
- Automatic and accurate weighing
- Improved behavior during mixing and extrusion (speed, aspect/profile)

And tomorrow…

Solvay's R&D teams are working on developing new solutions to:

- Incorporate silica into all parts of the tire
- Extend silica technology to the heavy vehicle market
- …and even greener processes for our production plants!

Easy processing: don’t compromise on productivity

Zeosil® Premium, up to 7 percent fuel savings
Zeosil® Premium, your passport for the A-A tire

HDS: the Solvay technology for all types of tires

The Highly Dispersible Silica range enables optimal dispersion in rubber compounds and guarantees the best wear resistance as compared to conventional silica. This silica is used in SUV, light truck, passenger, truck and bus tires and sport tires to balance fuel efficiency with no concession to durability or performance handling.

Did you know?

The silica Zeosil® 1165MP is now the world benchmark for low rolling resistance tires. Since the launch of the Zeosil® range, Solvay and its customers have helped reduce CO2 emissions by more than 40 billion.

Latest innovation from Solvay for the Tire industry, Zeosil® Premium is a new generation of high surface silica offering even less rolling resistance.

Boost your productivity substantially, with Solvay's expertise.

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The Solvay Silica range: customized high performance

Solvay, technology partner to tire makers

As the inventor of Highly Dispersible Silica for green tires in the early 1990’s, Solvay raised a new industry standard and remains a pioneer today. We stand at the industry leader. Supplying the world’s top companies and capturing over 50 percent market share.

Leading innovation...

On the strength of 20 years of continuous innovation, Solvay today offers the widest range of silicas, protected by a large number of patents on processes and applications. Zeosil® Premium, an advanced highly dispersible silica, reduces rolling resistance even further. Solvay research teams are constantly developing innovations to make tires safer, more eco-friendly and to make processes more efficient for tire manufacturers.

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The power of the largest silica production network in the world...

Solvay is the only worldwide manufacturer of highly dispersible silica with production capabilities and customers in North America, Europe and Asia, to serve the growing demand of its customers… and the confidence of being a partner near you.

The raw and local situations of our formula always suit the car and be matched to your needs. With you on the ground, we can tailor our solutions to best meet your needs and support your sustainable mobility challenges.

TIRE SOLUTIONS

High performance silica for tires

Let’s innovate for sustainable performance