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Bridgestone's "ologic technology" on the road



Using its "ologic" technology, Bridgestone, the world's largest tyre company, was able to develop a unique concept for the BMW i3 electric car. With this revolutionary new tyre technology that cuts down on fuel consumption and associated carbon emissions, Bridgestone was then able to put all its technological and engineering knowhow, and above all passion into developing an exclusive tyre that translates its vision for a future sustainable mobility.

The "ologic" technology, which capitalises on the synergies of a large diameter coupled with a narrow tread pattern, delivers significant improvements in aerodynamics and rolling resistance, while still offering outstanding grip in both wet and dry conditions¹. The result is a tyre that delivers outstanding fuel-efficiency without a trade-off in safety.

Combining a large diameter with a narrow tread pattern has several advantages. While the tread on smaller diameter tyres is typically inclined to excessive movement or "deformation" during driving, the larger diameter and higher belt tension significantly reduce tyre deformation and therefore conserve energy that is otherwise lost through internal friction which helps to reduce rolling resistance. By the same token, the narrow tread concept reduces aerodynamic resistance. The most spectacular achievement, however is that these improvements do not involve a trade-off in terms of safety. The tyre's long contact patch (relative to its narrow width), revolutionary tread design and compound still ensure outstanding grip in both wet and dry conditions.

A Vision for the Future

A shared commitment placing energy efficiency and safety at the top of the agenda made the decision to collaborate with BMW on this ground-breaking project a logical one. This “ologic” technology should help realise one of Bridgestone’s Long-term Vision goals: to contribute to a globally agreed-upon target of 50% reduction in CO₂ emissions by 2050.

Bridgestone is not only committed to developing products that cut down on fuel consumption and associated carbon emissions but which also reduce the overall environmental impact of the entire production and lifecycle.

Bringing the Concept to the Market

Released together with the BMW i3 in November 2013, the Ecopia EP500 ologic tyre is available in four sizes - 155/70 R19 84Q, 175/60 R19 86Q, 155/60 R20 80Q and 175/55 R20 85Q– and two winter varieties – the BLIZZAK LM-500 “ologic”, a lamellen tyre in sizes 155/70 R19 84Q and 88Q XL and the BLIZZAK NV “ologic”, a studless tyre (with Multicell^{®2} compound for Nordic conditions) in 155/70 R19 84Q.

The Bridgestone i3 tyre is the result of a longstanding partnership with BMW both on and off the racing track. Over the past 17 years, that partnership has included a long list of OE fitments, joint technological developments, exclusive collaboration on BMW’s Driving Experience and now, working as an exclusive development partner for the BMW i3.

Award-winning technology

Bridgestone’s “ologic” technology was voted “Tire Technology of the Year” in the Tire Technology International Awards for Innovation and Excellence 2014 in Cologne, Germany, on 11th February.

Saied Taheri, Director, Center for Tire Research (CenTiRe), Virginia Tech, USA, one of the award judges summarises why Bridgestone was selected: "The technology goes hand in hand with the global need to reduce CO₂ emissions and increase the safety of the road transportation system. Through both larger tyre diameter and narrower tread width, this unique technology keeps dry and wet traction and handling performance comparable to standard passenger car tyres, while reducing rolling resistance.

¹ The ologic technology was tested at Bridgestone’s Tochigi (Japan) Proving Ground in 2011 in size 155/55 R19 against 205/50 R18 and 175/65 R15.

More information on results can be found on the Bridgestone Media Center: www.bridgestoneewsroom.eu

² The unique Multicell rubber compound contains microscopic bubbles and tubes which clear water rapidly from between the tyre and ice or snow surface and assure a proper contact of the tyre on the road. As the water is cleared, the ‘bite’ particles come into contact with the ice surface, improving the grip even further.

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About Bridgestone EMEA (Europe, Middle East and Africa)

Bridgestone EMEA, with headquarters in Belgium, is a wholly owned subsidiary of Tokyo-based Bridgestone Corporation, the world’s largest tyre and rubber company. Bridgestone EMEA operates in more than 60 countries and has over 18200 employees. Across the region it has 14 tyre and tyre related plants, a major R&D Centre and a proving ground. Bridgestone EMEA’s premium tyres are sold in Europe, Middle East, Africa and globally.

For more information about Bridgestone in Europe please visit www.bridgestone.eu, www.bridgestoneewsroom.eu or find us on [Facebook](#), [Twitter](#), [Instagram](#) and [YouTube](#).