Carbon nanotubes: Expanding the tire performance space

Recent studies initiated by OCSiAl and carried out by independent laboratories have shown that TUBALL™ single wall carbon nanotubes are able to dramatically expand the tire performance space, removing the usual trade-offs faced by the tire industry. At ultra-low concentrations of just 0.1–0.2 wt.%, these nanotubes significantly improve the abrasion resistance, energy efficiency, wet grip, and electrical conductivity of most rubber compounds.

OCSiAl is proposing unique and highly innovative solutions for the rubber market. The company’s TUBALL™ MATRIX 603 product is a commercially available masterbatch for superior mechanical properties and conductivity of tires and rubber goods.

Following the highly encouraging initial results, and in view of the breakthrough benefits promised by this additive versus conventional ones, a number of major rubber and tire manufacturers are now running experimental or industrial trials to develop a new generation of tires.

The tire industry will be strongly impacted by this new technology. The introduction of silica years ago provided a significant performance increase over prior technologies. TUBALL™ now represents the next leap forward in performance, and without the trade-offs required with silica today. Ongoing trials with our customers are seeing the most advanced tire performance of any technology to date.

At booth C822 at the Tire Technology Expo 2017, to be held in Hannover from 14 to 16 February, OCSiAl will showcase its core product – TUBALL™ nanotubes – and the
advanced nanotube-based modifiers that are now available for materials in the tire industry.

Notes to editors
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About OCSiAl
OCSiAl is the first company to develop a breakthrough technology for the production of TUBALL™ - 80% single wall carbon nanotubes - enabling economically viable, large-scale commercial use. In 2014 OCSiAl entered the nanomaterials market with its universal additive TUBALL™, which contains 80% of single wall carbon nanotubes. OCSiAl develops technologies based on nanotubes for a range of applications including lithium-ion batteries, elastomers, plastics, transparent conductive films, composite materials and others. In 2016 OCSiAl launched a unique technology – the super-concentrate TUBALL™ MATRIX. OCSiAl, headquartered in Luxembourg, has regional offices in the USA, Russia, Korea, China, Hong Kong and India. Details about the company are available on the OCSiAl website: www.ocsial.com