Technical articles

F. GRASSO, F. BACCHELLI, B. PELLIZZARI, P. DE MARCO, G. CUDER, T. WU, S. COPPOLA
New developments in truck tires: performance and sustainability ................................................................. 244

An investigation for providing tire tread compounds for medium severity service, characterized by reduced NR content, dual-filler reinforcement and containing different S-SBR grades with or without functionalization is presented. Besides, the fossil oil required in the formulation is replaced by a bio-sourced plasticizer.

C. PAULO, P. PRELE
Improving anti-scratch performance of PP copolymer compounds with silicone-based technology ................................................................. 248

The automotive industry’s increasing use of plastics and trends such as driverless cars are spurring demand for improved part aesthetics and long-term performance in vehicle interiors. Consumers expect their car’s interior to maintain an attractive visual appearance, pleasing tactile properties, and consistent quality. According to a report by the American Chemistry Council, in 2016, polypropylene (PP) was the leading resin used in lightweight vehicles in North America [84 lbs/vehicle] [1].

B. K. LARSON, J. M. HESS, J. M. WILLIAMS II
Procedure for estimating oil 3D solubility parameters ...................................................................................... 252

The oil solubility parameters estimation procedure (OSPEP) described here represents a relatively simple procedure for estimating the Hansen 3D solubility parameters for an oil. In an iterative procedure two titrations and a dynamic scanning calorimetry (DSC) test can be used to estimate the three Hansen solubility parameters for the oil.

S. R. VAIKUNTAM, E. SUBRAMANI BHAGAVATHESWARAN, K. W. STÖCKELHUBER, S. WIETSSNER, G. HEINRICH, A. DAS
Development of high performance rubber composites from alkoxide-based silica and S-SBR

Solution styrene butadiene rubber (S-SBR) and silica-based composites are prepared by hydrolysis of TEOS in an organic solution of styrene butadiene rubber with n-butylamine as catalyst. Addition of a silane coupling agent (TESPT) improves the performance and properties of the composites. The results are compared with composites containing commercial precipitated silica at similar loading.

Reports

Interview with Reinhard Danzer, new co-managing director of LWB Steinl ....................................................... 242

Automotive silicone market worth USD 3.33 billion by 2023 ........................................................................... 259

Cutting, splitting, peeling of plastics, rubber, and cork. Fecken-Kirfel offers cutting solutions for all purposes ........................................................................ 260

Press design and manufacturing in large format becomes standard .................................................................. 271

Columns

Editorial ........................................ 231
RFP news ...................................... 234
People in the news .................. 273
Book reviews ........................... 275
Suppliers list ............................... 276
Publication information & contacts ......................................... 278