

Technical articles

F. DUDENHÖFFER

Global automotive market 2018 16

The outlook for the global car markets in the coming years is rather bad. On the one hand, production plants will have to be converted to electro mobility using large investments, and on the other hand, the demand for new cars is falling. Major austerity programmes to switch to electric cars have been worked out. Porsche, for example, wants to save EUR 6 billion over the next eight years by rationalising its operating processes, while spending more on the development and production of electric cars.

J. W. M. NOORDERMEER, W. DIERKES, A. BLUME, H. VAN HOEK, L. A. E. M. REUVEKAMP, S. SAIWARI

Life-time recycling loops for elastomer products: state-of-the-art 24

The present paper reviews the latest developments in recycling: devulcanization of rubber articles, including tires of various sorts, and the contribution of the University of Twente in this field. It highlights what has been achieved for different major rubber types, but also what the hurdles are to be overcome before rubber recycling is as obvious a technology as the manufacturing of first use rubber-articles.

T. CLAUS, J. MENZEL, B. TRABER

Varying fuel compositions worldwide: What are the effects on seals? 32

Due to the need for new fuels with a lower environmental impact – may it be either lowering the carbon dioxide, general greenhouse gas, NO_x or particle emissions – the worldwide landscape of fuel compositions is currently drastically changing. While in Central Europe a specified fuel is predominant, the composition of fuels might tend to vary more in most other countries.

Z. S. PETROVIĆ, M. IONESCU, J. MILIĆ, J. R. HALLADAY

EPDM rubber plasticized with polymeric soybean oil of different molecular weights 40

Due to environmental and sustainability concerns, it is desirable to replace mineral oil with vegetable oils as processing aids and plasticizers in rubbers. In this paper the effect of four polymerized soybean oils of high viscosity on processing and physical properties of EPDM rubber in a standard sulfur-cured formulation is evaluated.

I. ISMAIL, M. K. HARUN

Adhesion failure of rubber/metal composites undergoing corrosion 49

Rubber/metal composites tend to fail prematurely due to loss of adhesion of the rubber to the metal substrate, when they are exposed to aggressive conditions such as marine environments. The aim of this work is to elucidate the adhesion failure mechanism by cathodic disbonding and anodic undermining tests using a commercial bonding system for bonded rubber/metal.

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