Technical articles

R. KIPSCHOLL, R. STOČEK
Quantification of chip and cut behaviour of basic rubber (NR, SBR) ................................................................. 88

In this work a new laboratory test equipment is presented, that allows the definition of suitable load conditions (force, rotational speed, impact incidence). The Instrumented Chip & Cut Analyzer (ICCA) collects all relevant data during the test. Using a mathematical algorithm, realistic and reliable answers on CC behaviour of the rubber are derived from the measurements.

V. BARBERA, L. RUBINO, S. MUSTO, G. INFORTUNA, V. CIPOLLETTI, A. CITTERIO, M. GALIMBERTI
Serinol derivatives for the sustainable vulcanization of diene elastomers ................................................................. 92

Serinol and serinol derivatives are used in place of diphenyl guanidine as secondary accelerators for the vulcanization of compounds based on diene elastomers and silica as the filler. Kinetics of crosslinking are investigated and confirmed by performing vulcanization of an NR based compound in the absence of any fillers. Serinol can be obtained glycerol transformed, by means of sustainable technologies into molecules suitable for the rubber world.

C. HOPMANN, M. DRACH, N. YESILDAG, S. GHARBI, S. SITZ
Gas permeation behavior of thermoplastic vulcanizates (TPV) and ethylene-propylene-diene rubber (EPDM) under consideration of processing influences ........................................ 104

For sealing materials in contact with gases such as hydrogen, a consideration of gas permeability is of elementary importance for the assessment of safety, functionality and reliability. The aim of the presented study is to give an overview of the permeation behavior of thermoplastic vulcanizates (TPV) and ethylene-propylene-diene rubber (EPDM) towards hydrogen under consideration of processing influences. A comparison of TPV and EPDM shows a differentiated permeation behavior.

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