

# RubberWorld

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**Characterization of rubber-to-metal adhesives by thermal analysis**

**Evaluation of micronized rubber powders with cost/performance benefits**

**Combating the use of environment polluting organic solvents**

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## FEATURES

### 15 Tech Service: Combating use of environment polluting organic solvent during tire retreading

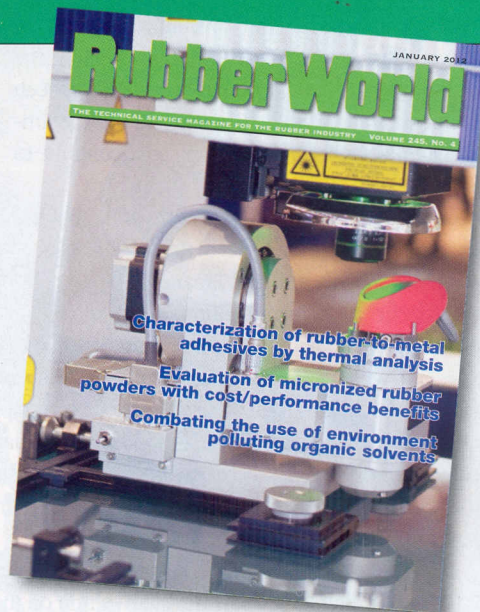
by Ramendra Nath Majumdar, consultant.

Alternatives to VOC-cement spray used on buffed casing during tire retreading operations are discussed, including water-based Zevoc cement, high-synthetic cementless cushions and direct application of the cushion by a VMI-AZ extruder, all of which are said to put an end to environment-polluting emissions from VOC-cement spray to buffed casing.

### 18 Characterization of rubber-to-metal adhesives by thermal analysis

by Michael J. Moore and Swapnil Bondre, Freudenberg NOK Sealing Technologies.

Methods of thermal analysis of rubber-to-metal adhesives, including differential scanning calorimetry (DSC), thermogravimetric analysis (TGA) and dynamic mechanical analysis (DMA), are reviewed, and the suitability of each technique with respect to various classes of adhesives is discussed in order to provide optimization of the production process.



### 25 Micronized rubber powders

by Ravi Ayyer, Tom Rosenmayer and Frank Papp, Lehigh Technologies. An evaluation of micronized rubber powders is presented, including surface morphology, surface chemistry, surface area and particle size distribution.

### 32 Instrumentation and test labs directories

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