

SESSION 1. NEW REGULATIONS FOR RUBBER CHEMICALS

- Paper 1 **The new European Chemicals Policy – implementation of REACH as a supplier of the rubber industry**
Dr Volker Börger, Schill+Seilacher "Struktol" Aktiengesellschaft, Germany
- Paper 2 **Breakdown products of curatives and antidegradants used to produce food contact elastomers**
Dr Martin Forrest, Rapra Technology, UK, Dr L. Coulier, TNO Nutrition and Food Research, The Netherlands, Dr B.G. Willoughby, Consultant & Mr A. Thorn, Consultant, UK
- Paper 3 **The challenges of replacing existing compounding ingredients because of legislation**
Warren Febery, Clwyd Compounds Ltd, UK

SESSION 2. FILLERS IN RUBBER AND THEIR EFFECTS

- Paper 4 **Performance enhancement in rubber by modern filler systems**
Dr Joachim Fröhlich, W. Niedermeier & B. Schwaiger, Degussa AG, Germany
- Paper 5 **A novel method for preparing rubber formulations using silanised silica nanofiller**
A. Ansarifar & L. Wang, Institute of Polymer Technology and Materials Engineering, Loughborough University, R.J. Ellis, Avon Vibration Management Systems Limited & S.P. Kirtley, Avon Automotive, UK
- Paper 6 **Mechanical, ageing and diffusion characteristics of chitin reinforced natural rubber composites**
Aditya Jayant & G. Unnikrishnan, National Institute of Technology - Calicut, India
- Paper 7 **Glass flake particles for enhanced permeation resistance of elastomer compounds**
Dr Christopher A. Stevens & David W. Mason, NGF EUROPE Ltd, UK
- Paper 8 **Effect of nano CaCO₃ on thermal properties of styrene butadiene rubber (SBR)**
S. Mishra, N.G. Shimpi & J. Verma, North Maharashtra University, India

SESSION 3. VULCANISATION AND CROSSLINKING

- Paper 9 **Cure systems for high performance rubber applications**
M. Saewe, H. Kleinknecht, H.-M. Issel & C. Rosca, Rhein Chemie Rheinau GmbH, Germany
- Paper 10 **Novel hybrid crosslinker as scorch safe accelerator**
Dr Hermann-Josef Weidenhaupt & Dr H. Buding, Lanxess Deutschland GmbH, Germany

SESSION 4. ADDITIVES

- Paper 11 **New structures of silanes in silica filled tread compounds**
Oliver Klockmann & Andre Hasse, Degussa AG, Germany
- Paper 12 **"Green" silanes - a way to reduce emissions**
Michael Backer, Laurence Stelandre & Simeon Bones, Dow Corning Ltd., UK

SESSION 5. PLASTICIZERS

Paper 13 **Crosslinkable plasticizer "Liquid Rubber (LIR)"**
Mizuho Maeda, Elastomer Division, Kuraray Europe GmbH, Germany

SESSION 6. COMPOUNDING AND PROCESSING

Paper 14 **New FKM compounds for turbocharger hose liner application**
Bhawan Patel, Milliken Speciality Elastomers, UK

Paper 15 **Continuous mixing process and properties of rubber filler composite based on E-SBR-Silica-Silane**
Joseph W.M. Gnanamani, S. Luther & R.H. Schuster, Deutsches Institut für Kautschuktechnologie e.V., H.-J. Radusch, Martin Luther University, & U. Görl, Degussa AG, Germany

Paper 16 **Smart NR products – converging frontier technologies through commercial innovations and submicron dispersions for a new paradigm in NR product performance**
Colin Ruggles, Mr M. Selvaraj, Dr R.K. Matthan & Mr N. Sivaynana Moorthy, Revertex Malaysia, Malaysia

SESSION 7. TESTING / MECHANICAL

Paper 17 **Diffusion in polymer systems with moving boundary**
M. Hassou, F. Couenne & M. Tayakout, Université Lyon, France

Paper 18 **Carbon black dispersion measurements via interferometric microscopy**
Elmar Hartmann, Atomic Force F&E GmbH, Germany

Paper 19 **Prediction of mixing at various mixing times and cure characteristics of the rubber compound**
Mohammad Karrabi & Somayyeh Mohammadian-Gezaz, Iran Polymer & Petrochemical Institute, Iran