Europe Rubber Industry Forum
all about rubber compounding

9-11 MAY 2017
VIENNA, AUSTRIA

www.technobiz-europe.com
TechnoBiz Europe is organizing 2nd Edition of “ERIF 2017: Europe Rubber Industry Forum 2017”, a specialized event aimed for rubber industries in the Europe. The event theme is “All about Rubber Compounding”. This forum is focusing on latest technical developments on rubber compounding and practical needs of rubber compounders. In almost all processes, rubber compound has the largest influence on total cost; whether it is extrusion, molding or any other process. This forum covers material, machinery, processing, testing and costing aspects of compounding and aimed for both technical and non-technical from rubber industries. For the sustainability of the industry, “Innovation and Knowledge” play an important role to be cost effective in production. This forum is all about innovations and knowledge aspects of rubber compounding. Leading rubber technologists and researchers are presenting specialized topics. Along with the presentations, panel discussions on “Influence of Compounding on Technology and Rubber Processing” will be organized as part of the forum to create an interactive platform for both delegates and speakers. These presentations and panel discussion are a major section of this Forum.

As part of this forum, two specialized training courses will be held. Prof. Dr. Rober Schuster will be teaching 1-day course: Rubber Reinforcement with Carbon Black & Silica and Dr. Hans-Joachim Graf will be teaching an one day training course on “Rubber Technology for Non-Technologists”.

Event Schedule

9 May 2017: Training Courses

09.00-17.00 | Rubber Reinforcement with Carbon Black & Silica
Prof. Robert Schuster, Germany

09.00-17.00 | Rubber Compounding for Non-Technologists
Dr. Hans-Joachim Graf

DAY 1

10-11 May 2017: Conference – All about Rubber Compounding

10 May 2017

09.00-09.10 | Welcome Remarks & Introduction
Dr. Thomas Früh

09.10-09.40 | Surgeon Gloves with Innovative UV-Technology – A New Dimension in Skin Care and Handling Comfort
Dr. Armin Holzner

09.40-10.10 | Compounding performance latex products for European regulation
Gunther Lottmann

DAY 2
11 May 2017

08.45-09.00  
DAY 1 RECAP

09.00-09.10  
“Europe Rubber Technologist 2017” Award Presentation

09.10-09.40  
Experimental Results on Morphological and Engineering Consequences of Good and Bad Mixing
Dr. Dariusz Bielinski

09.40-10.10  
Review of Mixing and it’s Effect on Polymer Performance
Dr. Hans-Joachim Graf

10.10-10.40  
Rubber Injection Molding and its Specific Peculiarity
Leopold Praher

10.40-11.00  
COFFEE/TEA BREAK

11.00-11.30  
How to Design NBR-Rubber Compounds
Robert Stäber

11.30-12.00  
Compounding Vamac AEM for Various Applications
Klaus Kammerer

12.00-12.30  
PANEL DISCUSSION
Corporate Sponsorship for the ERIF 2017 will be offered to limited companies. The package include:

- Insertion of Logo in the promotional materials & documents
- Insertion of Product Catalogue in the Event Delegate Bag
- THREE Tickets to participate in all the forum activities including conference, training and networking dinner.
- Table-Top Booth to display products and services

Europe Rubber Technologists Dinner 2017

On 10th May 2017, “Europe Rubber Technologists Dinner 2017” will be organized as part of this forum. This dinner is aimed to be networking platform for rubber technologists based in Europe to exchange ideas and information. This dinner event is open for both delegates and non-delegates of the forum. The dinner ticket cost is 75€ /person. The dress code is business attire. Anyone with minimum 5 years technical experience in the rubber processing based in Europe are invited to join this unique dinner event.

Europe Rubber Technologist 2017 Award

TechnoBiz has initiated “Europe Rubber Technologist” award to honor the dedicated rubber technologists who contributed to benefit the Europe Rubber Industry. The organizing committee will select the rubber technologist who is European National with practical, teaching and research experience for this award. This award will be presented at this forum. The 2016 Award was given to Dr. Gerard Nijman.

Corporate Sponsorship Opportunity: 6,000 Euros

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Training Courses

Rubber Reinforcement with Carbon Black & Silica

The training is designed to provide an overview on filler reinforcement by Carbon Black and Silica/Silane in tire formulations and technical rubber goods. The advantages and disadvantages of both technologies will be presented. With the implementation of silica in the tire technology (green tire) the tread properties have been successfully improved with respect to rolling resistance and wet grip. This leads directly to significant reductions of fuel consumption and safe driving at higher speed. Details about silanization with different silanes (mono- and difunctional) under different mixing conditions and temperature regime, the degree of silanization, the impact on silica dispersion and dynamic mechanical as well as ultimate properties
will be presented. However, recent developments demonstrate that optimal dispersion of CB leads to similar performance and in addition a very substantial improvement of abrasion resistance. The key-parameter for this success is a properly designed filler surface activity and filler – polymer interaction. Key parameters to improve the processing parameters of rubber compounds as well as the final material properties are presented. The factors that lead to the required nano-dispersion of the reinforcing fillers will be discussed for the two different filler systems. In addition the problem of filler transfer and phase distribution of CB and polar precipitated silica in non-polar rubber blends (BR/SBR and BR/SBR/NR) will be an important part of the Seminar.

This course outline includes:
- Manufacturing of CB and Silica
- Characterization of Filler Particles
- Surface Specific Area and Structure
- Surface Activity
- Incorporation and Dispersion of CB and Silica
- Flocculation of filled Compounds
- Methods to measure Dispersion
- Technical Mixing Procedures
- Special Features of Silica/Silane Technology
- Properties of uncured filled Compounds
- Properties of cured filled Compounds
- Fracture Mechanical Features
- Functional Polymers for better Dispersion
- New Developments

Rubber Compounding for Non-Technologists

This training program is aimed for non-technical personnel in the rubber industries. This is suitable for sales executives, purchasing managers, human resource managers as well as general managers, who are just entering the rubber industry, etc., and who are mainly non-technical people. Understanding each other is a precondition for successful cooperation and team working. The nature of rubber and its processes requires multidisciplinary thinking and cooperation in cross-functional teams. It is important to understand the technical terms and the way, technician think and act. The course is focusing on basics of rubber compounding and processing in easier terms, which covers following topics:
- Structure of Rubber Compounding Industry
- Rubber Raw Materials – Natural Rubber, Synthetic Rubber & Blends
- Rubber Chemicals – Types and Purpose
- The Rubber Compounding Unit
- Injection Molding, Extrusion and Miscellaneous Processes
- Testing of Rubber and its Meaning
- Process Approval Procedure and Quality Aspects
- Challenges in Rubber Manufacturing with Industry 4.0

### Registration Fee / Person

<table>
<thead>
<tr>
<th>Codes</th>
<th>Event Name</th>
<th>Fee/Person</th>
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<tbody>
<tr>
<td>ER-1</td>
<td>Training : Rubber Reinforcement with Carbon Black &amp; Silica</td>
<td>750 €</td>
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<tr>
<td>ER-2</td>
<td>Training : Rubber Technology for Non-Technologists</td>
<td>750 €</td>
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<tr>
<td>ER-3</td>
<td>Conference: All about Rubber Compounding</td>
<td>950 €</td>
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<td>ER-4</td>
<td>Europe Rubber Technologists Dinner 2017</td>
<td>75 €</td>
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<tr>
<td>ER-5</td>
<td>Complete Forum (1-training course+conference+dinner)</td>
<td>1,600 €</td>
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Instructors

**Prof. Robert Schuster:** Robert H. Schuster studied organic and physical chemistry. After receiving his PhD in Freiburg (Germany) he joined in 1984 the German Institute of Rubber Technology (DIK) in Hannover. As the director of DIK (1991 – 2011) he was involved in worldwide research projects concerning mixing, processing, vulcanization, rubber – filler interaction, new nanocomposites, recycling and environmental issues. Since 1995 R. H. Schuster is Professor at the University of Hannover. He is the author of three books and more than 450 articles. For his distinguished contributions to Rubber Science and Technology he received the “Carl Harries” Medal from the German Rubber Society (DKG) and the “Melvin Mooney” Award from the ACS Rubber Division. Currently Robert H. Schuster is foreign expert at the EVE Research Institute in Qingdao (China).

**Dr. Hans-Joachim Graf:** Hans-Joachim Graf has over thirty years’ experience in the rubber industry. He was first with manufacturing companies for pharmaceutical and technical rubber parts. He then joined DESMA a manufacturer of Rubber Injection molding and polyurethane shoe machines responsible for process development, followed by RheinChemie as senior manager of material developments for rubber industry. After Cooperstandard Automotive (CAN), division of profile extrusion, as a director of materials, he joined WOCO (GE), a manufacturer of injection molded parts in charge for material development. Since retirement he act as a consultant in the rubber industry and science adviser for TechnoBiz-group. Mr. Graf has authored over 60 publications and paper presentations and invented more than 15 patents. He has given seminars for graduates at University of Waterloo and German Institute Rubber Technology (DIK). He is a member of the American Chemical Society (ACS), Rubber Division of ACS (RdofACS), Deutsche Chemische Gesellschaft (GDCh) and Deutsche Kautschuk Gesellschaft (DKG). He received his diploma degree from University of Mainz and his doctorate in polymer chemistry from University of Freiburg, both Germany. During DKT’12 (German Rubber Conference 2012) he was awarded with the Erich-Konrad Medal of the DKG.

Venue

**Gartenhotel Altmannsdorf**
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