Arkema Shanghai Technical Polymers

"Innovations in High Performance Engineering Thermoplastics"

**DAY 1 - Monday, April 11th**

**Session Chairman : Mr Sam Angove**
**Managing Director - enys international pte ltd., Singapore, &**
**Associate - Nexant / Chem Systems Inc**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Registration and welcome coffee:</td>
</tr>
<tr>
<td>08:55</td>
<td>Welcome and Introduction by Conference Organiser</td>
</tr>
<tr>
<td>09:00</td>
<td><strong>Key Note Address</strong></td>
</tr>
<tr>
<td>09:40</td>
<td><strong>Consideration in Resin Selection</strong></td>
</tr>
<tr>
<td>10:20</td>
<td><strong>Specialty Additives and Compounds</strong></td>
</tr>
<tr>
<td>11:00</td>
<td>Morning Coffee Break</td>
</tr>
<tr>
<td>11:30</td>
<td><strong>Plastics for Electronics</strong></td>
</tr>
<tr>
<td>12:10</td>
<td><strong>Boehmite as a Halogen Free Co-Flame Retardant for Engineering Plastics</strong></td>
</tr>
<tr>
<td>14:00</td>
<td><strong>OPTIM® in Glass filled PP and Nylons for Automotive Applications</strong></td>
</tr>
<tr>
<td>14:40</td>
<td><strong>New Reinforcing Agent for Polyolefins - Enhancing Engineering Performance</strong></td>
</tr>
<tr>
<td>15:20</td>
<td>Afternoon Refreshments</td>
</tr>
<tr>
<td>16:00</td>
<td><strong>Bio-Plastics</strong></td>
</tr>
<tr>
<td>16:40</td>
<td><strong>Innovative High Temperature Polymer replacing Metal and Rubber Tubing</strong></td>
</tr>
</tbody>
</table>

---

**OPTIM® in Glass filled PP and Nylons for Automotive Applications**

Polypropylene possesses excellent mechanical properties when it is oriented. For automotive engineering moulding applications, it is not possible to orient the polymer. An alternative is to reinforce PP with glass fibers, both short and long. PP being non polar does not have good interaction with glass fibers. OPTIM® provides the solution to compatibility of PP with glass fibers. Excellent mechanical properties are achievable bringing PP into engineering plastics range. OPTIM® also finds application in toughening of Nylons, Nylon alloys and their composites. Nylon show poor dimensional stability and is sensitive to moisture. OPTIM® with Nylon reduces the sensitivity to moisture and increases dimensional stability of the product.

**Samit Jain, Director**
Pluss Polymers Pvt Ltd., India

---

**Bio-Plastics**

Thermoplastic resins based on renewable resources are reviewed. Use of traditional polymer alloys and additives to design compounds for Engineering Applications are introduced. Reinforced, Conductive, Impact modified and Wear Resistant advanced compounds based on renewable resource plastic materials are compared to traditional thermoplastic based compounds.

**Mark Bennick, Technology Manager**
RTP Company (Singapore) Pte Ltd

---

**Innovative High Temperature Polymer replacing Metal and Rubber Tubing**

Arkema recently developed an innovative high temp resistance polyphthalamide (PPA)-based material flexible enough to replace metal or rubber tubing in demanding auto and industrial applications. This entirely new class of flexible PPA, marketed under the Rilsan® HT brand name, 70% of which comes from renewable non-food crop vegetable feedstock, has opened-up new design possibilities to replace the heavy and corrosion-prone metal tubing or bulky and chemical swelling-prone rubber tubing in application such as in exhaust gas recirculation, transmission oil cooling or air intake tubing etc. Rilsan® HT being lighter has also help fulfill many automotive OEM's drive to reduce vehicle weight, leading to reduction in emissions and fuel consumption.

**Dr Simon Ting, Market Development Manager**
Arkema Shanghai Technical Polymers
DAY 2 - Tuesday, April 12th

Session Chairman: Mr Sam Angove
Managing Director - enys international pte ltd., Singapore, &
Associate - Nexant / Chem Systems Inc

Applications of High Performance Plastics

09:00 "The Use of High Heat Polyamides in Electrical and Electronic Applications"

Abstract to follow ......

Chris Schroder, Global Innovation Program Manager
Stanyl Product Line, DSM Engineering Plastics Europe

09:40 "LCP (Liquid Crystal Polymers) - Ideal for Trends in the Electronics Industry"

Ticona Engineering Polymers, USA

10:20 "Vehicle Electrification - How New Materials are needed for this Market Trend"

Hybrid and pure electric vehicle market is expected to grow by 17% for the next 5 years and that by 2020 20% of all new cars will be electric vehicles. In this presentation, BASF will showcase products for the alternate energy vehicle market segment, including Ultramid®(Polyamide), Ultradur®(PBT) and Ultrasyn®(PES) which have varying properties like high strength, high temp resistance, hydrolysis resistance, bio-based, stronger impact strength and others, which can help towards making these vehicles perform more efficiently.

Edward Hallahan, Marketing Manager, High Performance Products
Ticona Engineering Polymers, USA

11:00 Morning Coffee Break

11:30 "Challenge and Opportunity in Auto Parts with Polyamide"

Automotive industry has continuously demanded many requirements such as short development term, light weight, environment friendly solution and cost reduction. General approaches are no more able to meet such demand these days. In this session, Rhodia will present new materials and its own recent innovations which can bring real solutions to satisfy such requirements to not only car OEM, but also final user.

Deok-Soo Lee, Sales Director - SE Asia and Japan
Rhodia Polyamide, Korea

12:10 "New Polyamide based Solutions for Structural Parts and Blow Moulded Articles"

This presentation will look at new products and technologies aimed at reducing weight, emissions and costs including solutions like organic sheets in structural composite parts, high modulus materials for metal replacement, customized materials for foaming and new blow-moldable Polyamide grades to comply with latest fuel emission regulations. Lightweight construction means designing "at the edge". Traditional design methodologies and conventional CAE tools are reaching their limits. New design and analysis software helps to push weight reduction to the next level.

Thomas Babi, Asia Pacific Head of Tech Marketing & Eng Services
Lanxess Hong Kong

14:00 "Integration of Magnetics, Semiconductors and PCBs in one Component"

The continuous trend towards convergence and miniaturization is generating significant interest in new technologies for electronics. This paper details a packaging technology which allows three dimensional stacking of magnets and semiconductors through the integration of a semiconductor chip and a common mode filter into one thermoplastic package. For the first time ever, this filter is integrated directly into the thermoplastic part which is used as the substrate, filter and housing at the same time. Laser direct structuring in combination with Stanyl® ForTi™, an ultra high performance, entirely halogen-free high temperature thermoplastic, omits any wires for the realized coil, and also facilitates high flexibility in design and manufacturing, allowing ultra small footprints and the realization of components suitable for surface mount technology.

Allen Chen, Regional Manager
DSM Engineering Plastics, Taiwan

14:40 "Challenging the mind set with Ticona's latest innovations in Acetal Copolymer Technology"

Ticona has over 50 years experience as a manufacturer of engineering thermoplastic resins. This presentation will explore the characteristics and benefits of two of their latest innovative Hostaform POM product series which are challenging the mind set of the industry and which can be utilized in an array of applications in extremely harsh environments like automotive fuels, water & chemical industry - Hostaform High Strength series and 3rd generation High Impact & Extreme Toughness series of acetal copolymers.

Mervyn Cox, POM Product Marketing Manager, Asia Pacific
Ticona Engineering Polymers, UK

15:20 Afternoon Refreshments

Processing Technology

16:00 "High Performance Twin Screw Extruder ZSK Mc18: The Benchmark for Maximum Throughput and Highest Product Quality in"

Since the 1950s, when the principle of the self cleaning intermeshing screws was realised with the first twin screw compounder ZSK by Werner & Pfleiderer (today Coperion GmbH), there was a steady evolution towards higher free volume and higher power of these machines. This evolution to the high torque compounders, not only delivers higher specific throughput rates at lower specific energy consumption, but also leads to a improved product quality. For all compounding tasks which are torque limited, like filling and reinforcing of engineering plastics, it is beneficial to use those high performance compounders.

Dipl.-Ing Roland Elsaesser, Vice President Sales, Compounding & Extrusion, Coperion, Germany / Singapore.

16:55 "Injection - The Future: An Overview of New Injection Moulding Technology"

This presentation will consider various aspects of new injection moulding technology focusing on (i) Energy efficiency, (ii) 'Organometal' (over molding of organic fabric sheet hybrid structures for weight savings and additional functionality); (iii) 'Sinkmetal' (Combination of Thermoplastic and PUR floating for high gloss and scratch resistant surface qualities); and (iv) 'OptiMelt' (Production technologies for high gloss and optical parts)

Andreas Poettler, Processing Manager
Engel Machinery Shanghai, China
"Innovations in High Performance Engineering Thermoplastics"

11th & 12th April 2011, Singapore Marriott Hotel

Conference Delegate Registration Form:

Please photocopy if more space is required

Name: ____________________________________________
Name: ____________________________________________
Name: ____________________________________________

Company: ____________________________________________
Address: ____________________________________________
____________________________________________________
____________________________________________________

Contact Person: ____________________________________
Tel: ________________________________________________
Fax: ________________________________________________
e-mail: ____________________________________________

Conference Fee: SGD$ 980.00  [ ]
Discount Fee:  SGD$ 880.00  [ ]
> book and pay by March 16th 2100
> 3 or more from the same company

Please send registration form, together with either cheque or bank draft, payable to 'Chatsworth Associates Pte Ltd', or notification of TT, (in SGD$) to:

Chatsworth Associates Pte Ltd.,
Bk 109, #03-271
Lengkong Tiga,
Singapore 410109

or
Development Bank of Singapore
Parkway Parade Branch,
Acct. Name: Chatsworth Associates Pte Ltd
Acc: No: 027-900825-3
Bank Swift Code: DBSSSGSG

For any ENQUIRIES and to RESERVE your seat, please fax in the form or e-mail your registration to:

Dr Phil Adams
Chatsworth Associates Pte. Ltd.
Tel: +65 6743 6149 & Fax: +65 6743 6158
e-mail: padams@chatsworth-group.com

Confirmation will only be given however, on receipt of full payment.

General Information:

Centrally located in the heart of Singapore’s business, entertainment and shopping hub, the Singapore Marriott Hotel is a towering pagoda landmark not to be missed and epitomises the perfect melding of business and leisure.

ACCOMMODATION:
Should you require hotel accommodation please contact the Marriott Room Reservations Department directly at:

Tel:       Reservation Hotmail: +65 6831 4555
Fax:      +65 6831 4559
e-mail: mhrs.sindt.reservations@marriotthotels.com
URL:     http://www.marriott.com/hotels/travel/sindt-
singapore-marriott-hotel/

TRAVEL AGENT:
Our travel agent in Singapore will be happy to assist with any other hotel or sight-seeing arrangements that you may require. Please make contact directly with Catherine Tong at -

Broadway Travel & Tours Pte Ltd
Tel:        +65 6732 0990
Fax:       +65 6734 9488
e-mail:   broadway@singnet.com.sg

REGISTRATION FEES:
Registration fee for this Conference is SGD$980.00 , (no GST applicable) and this includes attendance at both days of the conference, a conference folder, lunch and coffee breaks. Special discount if paid before March 16th, or if 3 or more registrants attend from same company.

REFUND:
Full refund will be given (less 20% handling charge) if requests for cancellation are received, in writing, by April 1st. Thereafter, fees paid are not refundable although the person registered can send a substitute. However the organisers must be informed of such substitution by April 4th.

PAYMENT:
All payments must be received by March 25th, otherwise the organisers reserve the right to withdraw registrant.

CANCELLATION:
The organisers reserve the right of cancellation. Full refund will be given to the registrant if the course is cancelled.

SPECIAL REQUIREMENTS:
If you have special dietary needs or require other personal assistance, please inform the Conference organizer as early as possible and we will endeavour to accommodate where we can.