



Thermoplastic Elastomers

Special Interest Group

AUGUST 2016

A message from the new Chair Thomas Bell

Dear Fellow Members of the TPE Industry,

As you read this letter summer will be waning into autumn. Here in Houston we have had a hot, dry summer, but as many know there was more than enough rain in the spring. Our city is slowly recovering from the floods and as it always has, will continue to grow and diversify.

The same analogy might be applied to the TPE industry. The economy has not been kind to polymers in some areas, but the continued resilience and expanding diversity of TPE has led to further growth in applications and market volume. The TPE industry continues to be a great area for professional development and a lucrative commercial space.

This September, the TPE SIG will be hosting its biennial TOPCON at the Akron Hilton in Fairlawn, OH. The program will include two days of presentations on a host of subjects with keynote speakers on important topics of the time. One speaker of note from Houston will be speaking on the topic of 3D printing, bringing a demonstration unit for all to observe. In a separate contiguous program, some noted veterans from our group will be hosting a one day 'TPE 101' seminar for those new to the industry. I highly encourage you to attend the TOPCON and/or symposium, and recommend both to your colleagues.

One more note in closing. I am a Cleveland (Lakewood, OH actually) and I am proud to say my city showed just how great it can be when the Cavs won the NBA championship. Can you imagine what would happen if the Indians won the World Series?? And the Browns, well.....in another life perhaps.

I hope to see many of you at the TOPCON. Please say hello if you have chance.

Thomas Bell
TPE SIG Chair, 2016-2017

4spe.org



Thermoplastic Elastomers

Special Interest Group

Summary of Minutes from the May 23rd Board Meeting

1. Mukul Kaushik presented an update regarding ANTEC 2016.

- Session attendance – max of 40 (tutorial), min of 18.
- Tutorial important for attendance.
- Expects higher attendance in ANTEC® Anaheim (2017).

2. Bill Blasius presented an update from the Thermoplastic Elastomers Conference 2016 Planning Committee.
“Going according to plan”

- Accepted authors will get reminder to submit full paper at end of May.
- **Need sponsors and exhibitors - ask your companies and colleagues.**
- Viv (SPE Akron Section) – “everything going to plan”
- BB—no program as final paper count TBD (therefore, no moderators yet).
- TB volunteered to be a moderator
- AS tentatively volunteered to be a moderator (not sure if attending Thermoplastic Elastomers Conference 2016)
- Viv—Open sponsorships: gold, one premier.
- TB—will go “halfies” on coffee break sponsorship
- Viv—by June 8 there will be a list of sponsors
- Viv—MB and BB will be the reviewers

3. Armando Sardanopoli presented an update regarding the Newsletter.

- Next one will focus on ANTEC® 2016
- How about highlighting a consultant on the SIG BOD vs. a company?
- Consultants on BOD to send AS write-up regarding their activities and area(s) of expertise.

4. 4. Tom Bell presented an update regarding the Nominations Committee.

- SW has resigned from the TPE SIG BOD as of today due to increased work commitments
- MB confirmed that he will be leaving BOD after-Thermoplastic Elastomers Conference 2016
- BG volunteered to chair the SIG in the future
- Tom Bell will take-over as SIG chair for 2016-17
- Bob Abell will take-over as nominations chair (replacing TB)
- IM asked for motion to make TB SIG chair
 - -? Motioned, BG 2nd
 - -all in favor, no opposed
- TB motioned to have BA appointed as chair of nominations committee
 - -IM 2nd
 - -all in favor, no opposed
- TB—we will need more BOD members with SW and MB departures
- TB to ask Kuraray to supply a BOD member

5. The next TPE SIG BOD meeting will be held on Thursday, August 18th at 10:00 AM EDT.



Thermoplastic Elastomers

Special Interest Group

Minutes Summary: TPE SIG BOD: February 11, 2016

Proceedings:

1. Iani Manas opened the meeting at 10:03 AM EST.
2. Minutes from December 10, 2011 were approved.
3. Mukul Kaushik presented an update regarding **ANTEC® 2016**.
 - a. Over 400 papers to be presented at the conference, approximately one-half of these papers have been reviewed to date.
 - b. Six papers (including one keynote and one tutorial) will be presented in the TPE SIG's technical session on Monday afternoon beginning at 1:30 PM EDT.
 - i. Mark Berard will present the ½-hour tutorial ("Fundamentals of Styrenic Block Copolymer TPEs") at the end of the technical session.
 - c. Current plans are for the TPE SIG Board to meet after the session is over at a time and place TBD
4. Kathy Schacht provided an update from the **SPE** organization.
 - a. Scott Marko will become more involved in the planning of Conference 2016
 - b. Kathy will remain as the TPE SIG liaison to SPE
5. Bill Blasius presented an update from the **Thermoplastic Elastomers Conference 2016 Planning Committee**.
 - a. Twenty-six papers scheduled for presentation
 - i. There are three "focus segments" planned for TOPCON 2016:
 1. renewables,
 2. wearables,
 3. 3D printing
 - b. A TPE "boot camp" hosted by Stephane Morin will be held on Tuesday, September 20th in the afternoon prior to the evening's TOPCON 2016 "welcome" reception
 - i. Approximately 20-minute presentations regarding TPE attributes and characteristics
 1. Mark Berard (Dexco Polymers) to present on styrenic TPEs and PVC.
 2. Jeff Munro (Dow Chemical) to present on olefinic TPEs.
 3. Sarah Westerdale (BASF) to present on TPUs.
 4. Stephane Morin (Alliance Polymers and Service) to present a wrap-up on choosing the right TPE.
 - ii. Contact Bill Blasius if you would like to volunteer for one remaining open presentation.



Thermoplastic Elastomers

Special Interest Group

Thermoplastic Elastomers Conference 2016

Check out the attached flyer for details of the program. The Thermoplastic Elastomers (TPE) Conference 2016 will take place in Fairlawn, Ohio (just outside Akron) from September 20th to 22nd. This year's conference will have a special program on Tuesday September 22nd. It will a primer on most of the important commercial thermoplastic elastomers. Each subject will be presented by an expert in their product.

Please note that the primer presentations will take place on Tuesday from 1 to 4 PM and will require a separate registration.

We are expecting a good turnout for the primer session due to the fact that the paper that attracted the largest audience at the TPE session was a primer on TPO elastomers. There should be many more out there who are interested in learning more about the other commercial thermoplastic elastomers.

Another important part of the TPE Conference program is the exhibit area. There is still a lot of room for companies to show off their products and technologies. Both material suppliers and end use manufacturers.

Then of course there is also a need for conference sponsors. If your company would like to get some additional PR and help support the program you can contact Kevin Melpass by e-mail at: kevin.malpass@diebold.com or by phone at: +1 330.490.4743.

Company Highlight:

In the past, we have highlighted committee member companies to thank the companies for their support through their employees. This month we will highlight members of the committee who are currently consultants for their own companies.

Iani Manas: Formally of Eaton Industries

Polymer Products Engineering & Design, LLC
@ www.polymerproductseng.com

Available Services:

- Formulating materials for existing and new application
- Solving materials related technical issues
- Improving materials to meet new standards
- Design of tubular products (both reinforced and unreinforced)
- New product development consulting using design for Six Sigma
- Polymer sustainability/green design evaluations
- Extrusion process training
- Expertise in extrusion process troubleshooting

Thomas Bell: Formally of Kuraray

S&T Group is a marketing and business services consulting business. Our focus is on TPE and thermoset elastomers, primarily styrenic block copolymers and EPDM and its derivatives. S&T Group has conducted many single client projects on topics ranging from product development to business expansion analysis. We also trade in high quality wide specification elastomers.

Armando Sardanopoli: Formally of BASF

Sardanopoli Specialty Elastomer Consultant (S-SEC): Material selection and processing troubleshooting of thermoplastic elastomers. Primary material specialist in TPU products.

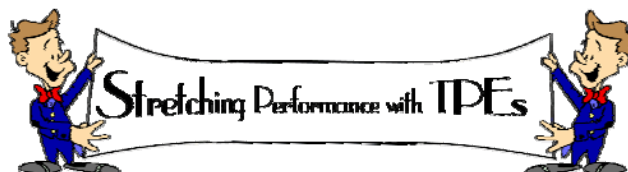
NON-PROFIT ORG.
U. S. POSTAGE
PAID
CANTON, OH
PERMIT #1005

Thermoplastic Elastomers 12th Topical Conference™



TOPCON 2016
September 20-22, 2016

Advance Program
and
Registration



Expanding Markets, Materials & Applications

Society of Plastics Engineers
Akron Section
250 S. Forge Street
Akron, OH 44325-0301



**Presented by the
Society of Plastics Engineers,
Thermoplastic Elastomers SIG
and The Akron Section SPE at
the Hilton Akron-Fairlawn
3180 West Market Street
Akron, Ohio 44333**

Co-Chairs:

William Blasius (S.I.G.)
wgblasius@gmail.com
Viv Malpass (Akron
Section)
[vivian.malpass@tek-
mark.com](mailto:vivian.malpass@tek-mark.com)

+1 774.545.0990

+1 330.342.1120

Registration and Fee Information

Please register on line at www.4SPE.org using the E-Touches service. If not feasible, please submit this form with all exhibitor and sponsor representatives identified in the next column.

Personal Registration: Submit this form or copy for EACH person registering. Mailed advance registration must include full payment and be postmarked by September 10, 2016. Circle status and cost.

<u>Status</u>	<u>Advance</u>	<u>On-Site</u>
TPE Tutorial	\$75.00	\$75.00
Conference		
Member	\$395.00	\$445.00
Nonmember	445.00	495.00
Joining Member*	490.00	530.00
Student or	65.00	70.00
Emeritus Joining	90.00	95.00
Student* Press		No Charge

*Includes first year SPE dues worth \$144 (\$31 for students)

- ☐ Please charge my credit card
☐ (right) My check is included for
 \$ _____

Display Table or Sponsorship

Reservations: These MUST include full payment and be postmarked or received online by August 8, 2016. Identify EACH representative in the format shown here, using copies of this form or equivalent. Sponsors are appreciated and will be well recognized. For information about advertising and promotion we can provide, contact Kevin Malpass. (kevin.malpass@diebold.com or +1 330.490.4743)

1 Gold Sponsor (with 3 free full conference registrations)	\$3,000
1 Premier Sponsor (with 2 free full conference registrations)	\$2,600
2 Lunch Sponsors (2 registrants each)	\$2,100
Tuesday Mixer (2 registrants)	\$1,800
Wednesday Reception (2 registrants)	\$2,100
4 Coffee Breaks (1 registrant each)	\$750
Exhibitor's Display Table - One 4x8 draped table with access to electrical outlet	\$1,000
Each registrant (maximum 3)	\$200

See Websites for Updates
akronspe.org or 4spe.org

Full-fee registrations include admission to all sessions, display exhibit areas, two lunches with keynote speakers and proceedings in USB flash drive format. Registrations are offered to full-time students and emeritus members at deep discounts. Journalists with proper press credentials are invited to visit all areas and functions.

To encourage nonmembers to join, SPE and the Akron Section offer a combination of TOPCON registration with SPE dues for one full year plus membership application handling fees. Those fees and dues for the first year are worth \$144.

Make checks payable to 'TPE TOPCON 2016' Mail checks and forms to:
 Society of Plastics Engineers TOPCON 2016
 Kathy Schacht
 6 Berkshire Boulevard, Suite 306
 Bethel, CT 06801 USA

VISA, MC, AmEx Credit Cards Accepted

Card # (Circle the brand above) Exp.
 Signature Security Code (from back)

Credit Card users may register at
4SPE.org or fax to +1 203.775.8490.
For more information, contact Kathy
Schacht at +1 203.740.5430 or
kschacht@4spe.org

Registration Identification

 Name as it is to appear on badge

 Company

 Work Address

 City State Zip

 Work Phone Work Fax

 e-mail

The TPE Primer

Tuesday, September 20 1:00 to 4:00p.m.

Stephane Morin, Host *Alliance Polymers & Service*

Commodity TPEs

Polyolefin Elastomers

Dr. Jeff Munro *Dow Chemical*

Styrenic Copolymers

Dr. Mark Berard

TSRC-Global PVC Alloys

TBD

Engineering TPEs

Polyurethanes

Sarah Westerdale *BASF*

Polyester Copolymers

TBD

Polyamide Copolymers

TBD

Specialty TPEs

Fluoropolymers

TBD IPNs

TBD
Shape Memory

Wrap Up TPE Selection

Stephane Morin *Alliance Polymers & Service*

Schedule

Tuesday, September 20

On-site Registration	3:00 pm to 6:00 pm ??
Set Up Displays	Noon
TPE Primer	1:00 pm to 4:00 pm
Displays Open	5:00 pm to 7:00 pm
Welcome Mixer	5:00 pm to 7:00 pm

Wednesday, September 21

Speaker's Meeting	7:30 am to 7:45 am
On-site Registration	7:30 am to 2:00 pm
Welcome Remarks	7:45 am
Displays Open	8:00 am to 7:30 pm
Tech Sessions – am	8:00 am to 11:50 am
Lunch	11:50 am to 1:15 pm
Tech Sessions – pm	1:15 to 5:30 pm
President's Reception	5:30 to 7:30 pm
SIG Board Meeting	6:30 pm

Thursday, September 22

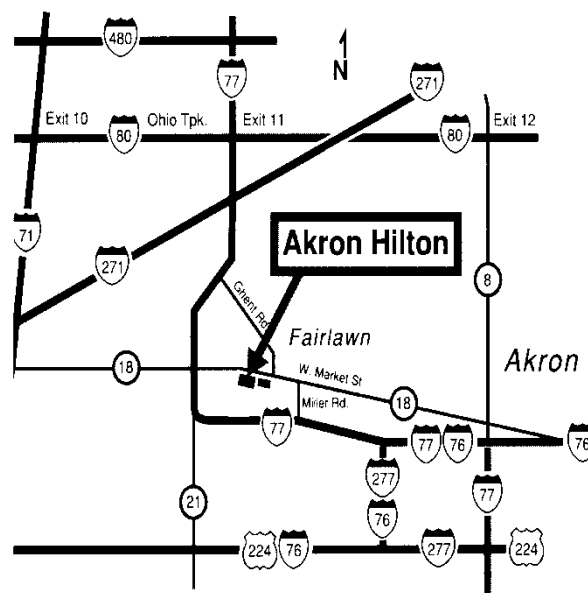
Speaker's Meeting	7:30 am to 7:45 am
On-site Registration	7:45 am to Noon
Displays Open	8:00 am to 5:00 pm
Tech Sessions – am	8:00 am to 11:50 am
Lunch	11:50 am to 1:15 pm
Tech Sessions – pm	1:15 pm to 4:30 pm
Adjourn TOPCON	5:00 pm

Hotel Reservation

Hotel reservations can be made online via our SPE Registration site, or by contacting the Akron Hilton (phone 800-525-2419, 330-867-5000 / fax 330-867-1648). Special rates are available until August 29 using the password "Sept 16". Refer to the SPE TOPCON if contacting the hotel.

The Hilton is between the Cleveland Hopkins Airport and the Akron-Canton Airport, about a one-half hour drive from each. From Hopkins, exit I71 to OH18; from Cleveland, exit I77 to Ghent Road; from Akron or Akron-Canton Airport, exit onto Miller Road.

SPE can accept cancellation of attendance and exhibitor registration and make a full refund only until September 1, 2016; no refund can be made after that date. The hotel also will make a full refund for a room cancellation received by August 29; after that date you will forfeit one day's room fee.



TopCon Technical Program

Keynote Address - Lunch

Wednesday

Deborah Douglas, The Douglas Group
"M&A for Thermoplastic Elastomers"

Thursday

Matthew Fiedler, re:3D
"Rocket Science to 3D Entrepreneur: An Account of Transitions"

The TPE Primer* - Tuesday: 1 to 4 PM

***Requires separate registration**

Stephane Morin, Host *Alliance Polymers & Service*

Commodity TPEs

Polyolefin Elastomers

Dr. Jeff Munro *Dow Chemical*

Styrenic Copolymers

Dr. Mark Berard *TSRC-Global*

PVC Alloys

William Blasius *Foster Corporation.*

Engineering TPEs

Polyurethanes

Sarah Westerdale *BASF*

Polyester Copolymers

Chris Schroder *DSM*

Polyamide Copolymers

Chris Schroder *DSM*

Specialty TPEs

IPNs

Kevin Cavicchi *UAkron*

Shape Memory

Kevin Cavicchi *UAkron*

Wrap Up

TPE Selection

Stephane Morin *Alliance Polymers & Service*

TopCon Conference:

Current Schedule, subject to change

Wednesday

Industry Update

Global TPEs: New Technology, Regional Market Shifts and Commoditization

Robert Eller *Robert Eller Associates LLC*

Additives for Performance

Selection and Application of Antimicrobial Additives in Thermoplastic Compounds

Lise Moloney (Jeff Trogolo presenting) *Sciessent*

Wednesday (continued)

Material Modifications and Developments

Soft, Processable SEBS Polymers for Compounds

Parashar Davé *TSRC Global*

Bonding Solutions for Styrenic TPE Medical Tubing

Dr. Kevin Cai *Teknor Apex*

Elucidating and Controlling the Morphologies of Charged Thermoplastic Elastomers

Dr. Rich Spontak *N. Carolina State University*

Small Angle X-Ray Scattering to Measure the Effects of Different Strain During Tensile Testing of TPU

Alex Sokolowski *BASF*

3D Printing

3D Printing: Emerging and Evolving Applications

Sarah Goehrke *3Dprint.com*

Thermoplastic Polyurethanes for Fused Deposition Modeling

Dr. Jake McDonough *Fenner*

Additive Manufacturing of Soft and Composite Parts from Thermoplastic Elastomers

Dr. Edmond Richer *Southern Methodist University*

Bio-Renewable Materials

UV-Absorbent Lignin-Based Multi-Arm Star Thermoplastic Elastomers

Dr. Chuanbing Tang *University of S. Carolina*

Sustainable Thermoplastic Elastomers from Terpene-Derived Monomers

Dr. Marc Hillmyer *University of Minnesota*

Thermoplastic Elastomers from Multifunctional Biomonomers

Dr. Eric Cochran *Iowa State University*

Full Cost Accounting of Biobased and Petroleum

Feedstocks

Libby Bernick *TruCost PLC*

Thursday

Scale Up and Processing

Market Applications for TPE Multishot Molding and the Tooling Technologies to Enable Success

John Berg *MGS Mfg.*

Fundamentals of Twin-Screw Compounding: Scale Up - The Bump in the Road Between Development and Commercialization

Dr. Paul Andersen *Coperion*

A 3-Dimensional Single Stage Compounder for Elastomers, TPO and Nanoscale Particulate

Keith Luker *Randcastle*

The Use of Next Generation Design of Experiments

Software for Discovery and Scale Up

Nina Visconti *Quantisweb*

Manufacturing Polypropylene (PP)/Waste EPDM

Thermoplastic Elastomers using Ultrasonically Aided

Extrusion

Dr. Avraam Isayev *University of Akron*

Wearable Technology

Thermoplastic Elastomer Compounds for Consumer Electronics and Wearables

Dr. Jae Jeong *Kraiburg TPE*

Design and Operational Challenges of Wearable Drug Delivery Systems

Dr. Hossam Metwally *Ansys, Inc.*

Co-extruded Multilayer Shape Memory Materials: Smart Layered Systems

Dr. Eric Baer *Case Western University*

Application of Engineering Plastics in Wearable Technologies

Chris Schroder *DSM*



Thermoplastic Elastomers

Special Interest Group



TPE SIG 2016 / 2017 BOARD MEMBERS AND CONTACTS

AUGUST 2016

Membership Chair

W. Robert Abell
PH: +1 302.475.2317
abellconsultants@comcast.net

Nominations Chair/LinkedIn Liaison

Thomas E. Bell
PH: +1 281.990.0909
tomebell@aol.com

TopCon 2016 Co-Chair

Dr. Mark T. Berard
PH: +1 225.309.0241
mark.berard@dexpolymers.com

TopCon 2016 Co-Chair

Bill Blasius
PH: +1 860.774.1559
wblasius@fostercomp.com

Secretary

Steve Brenno
PH: +1 507.474.5360
sbrenno@rtpcompany.com

Awards Chair

Reza Sadeghi
PH: +1 330.630.7108
osusadeghi@gmail.com

ANTEC® 2016 TPC

Mukul Kaushik
PH: +1 859.525.4748
mukul.kaushik@celanese.com

TPE SIG Chair 2016-2017

Tom Bell
PH: +1 281.990.0909
tomebell@aol.com

Newsletter Editor

Armando Sardanopoli
PH: +1 734.895.5875
sardanopoli-sec@live.com

Scholarship Chair

Edwin Tam
PH: +1 401.642.3753
etam@teknorapex.com

Treasurer

Robert C. Wegelin
PH: +1 330.414.1498
robert.wegelin@sbcglobal.net

Richard L. Rabe, Ph.D.

PH: +1 507.474.5546
dr_lrrabe@hotmail.com

Stephane Morin

PH: +1 734.710.6703
morin@apstpe.com

Richard Faulkner

PH: +1 704.905.4771
rfaulkner@teknorapex.com

Jeff C. Munro, Ph.D.

PH: +1 979.238.0576
jcmunro@dow.com

Prashant Mutyala

PH: +1 519.722.3776
prashant_40@yahoo.co.in

Iani Manas

PH: +1 330.562.3487
ianimanas@eaton.com

Executive Committee Liaison

Dick Cameron
PH: +1 412.860.6696
dcameron@4spe.org

Governance Liaison

Kathy Schacht
+1 203.740.5430
kschacht@4spe.org

SPE Headquarters

6 Berkshire Blvd., Suite 306
PH: +1 203.740.5422
FX: +1 203.775.8490
info@4spe.org

SPE European Office

Carine Roos
Zonnestraat 52
9600 Ronse, BELGIUM
PH: +32 498 85 07 32
FX: +32 3 541 84 25
croos@4spe.org



The **Thermoplastic Elastomers Special Interest Group (TPE SIG)** is always looking for new Board members to help with planning and execution of various SIG activities such as ANTEC® sessions, the Thermoplastic Elastomers Conference scholarship programs, and PlastiVan™ visits. The TPE SIG Board meets face-to-face at ANTEC® every year, at the Thermoplastic Elastomers Conference every other year, and by teleconference every six to eight weeks in between. As an incoming member, we ask for a three-year commitment from you and your employer. In return, we provide good networking opportunities and a word of appreciation for your company in one of our newsletters. If you are interested in joining us, please contact Tom Bell at +1 281.990.0909 or tomebell@aol.com.