INTRODUCTION TO PACKAGING USING:
MULTILAYER PLASTIC MATERIALS
SHEET AND FILM APPLICATIONS

SHORT COURSE AT:
SMITHERS RAPRA, SHAWBURY, UK
20TH SEPTEMBER 2017
1 DAY COURSE

PROMOTE YOUR PROFESSIONAL GROWTH
by training with the Plastic and Rubber Experts
COURSE OVERVIEW

Products containing multiple layers of polymers are becoming more common especially in applications where barrier properties; strength; weight or cost are an issue. This course will look at the wide range of technical benefits and properties that can be obtained and the production processes to achieve them.

COURSE CONTENT

Market review
Overview of current and future applications for multilayer sheet and film products. Market trends and growth opportunities.

Processing technologies
A review of all the polymer processing technologies and their capability to produce enhanced properties through combining different polymers.

Polymer selection
A review of the current and novel polymers available for use in coextruded multilayer products.

Product design
How a structure can be designed for packaging and specific construction, automotive and medical applications

Quality and process control
Control of the process for manufacture of structures with practical SPC examples demonstrated.

Properties of various barrier polymers
A comparison of the properties for various barrier polymers with an extended evaluation of the properties of EVOH for different applications.

COURSE OBJECTIVES

ATTENDEES WILL LEARN

- Understand the benefits and cost implications for having multilayer plastic materials
- Understand the polymer properties needed to provide desired properties or barrier resistance and be aware of the latest developments
- Make informed choices when purchasing product
- Understand process developments in multilayer plastic materials.

WHO WILL BENEFIT?

- Technical Managers
- Process Managers/Engineers
- Quality and Technical Service Personnel
- Buyers
- Technical Sales personnel who wish to gain an understanding of the properties for design and development of products as well as the advantages and capability of multilayer plastic materials

COURSE PRESENTERS:

- Dr. Peter Cox
  - BSc(Eng), DK, C.Eng,
  - MIMechE, FIMMM, Associate Consultant

- Dr Paul Shipton
  - BSc, PhD, Consultancy Director

COURSE FEE

£495 + VAT. A discount of 20% will be applied to delegates registering for both this course and the Pipe and Blow course. However, delegates are reminded that there is substantial overlap between the two courses. The course fee immediately reverts to full price, i.e. £495 if the participant cancels their place on the second course at a later date.
Please reserve a place on the **Introduction to Packaging Using Multilayer Plastic Materials, Sheet and Film Applications** Course:

- 20th September 2017

(please use one form per delegate, photocopies are acceptable)

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**CONTACT ADDRESS**

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**INVOICE ADDRESS** (if different)

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**PAYMENT INFORMATION**

Please indicate in which currency you wish to pay. If no box has been ticked the default currency will be £ Sterling.

- [ ] £ Sterling
- [ ] € Euro (This will be applicable at the prevailing rate)
- [ ] $ US (This will be applicable at the prevailing rate)
- [ ] Please invoice my company - Purchase Order Number*  
  Please enter your company Reg. no.:  
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*Please note company name on PO must state: 'Smithers Rapra and Smithers Pira Ltd'

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  - [ ] MasterCard
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  Card number:  
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  Name on Credit Card (in CAPITALS)  
  Signature:  

**CANCELLATION TERMS** By completing and returning this form delegates are agreeing to be bound by the cancellation terms and conditions of registration.

**RETURN TO:**

Smithers Rapra, Shawbury, Shrewsbury, Shropshire, SY4 4NR, United Kingdom. Enquiries Tel: +44 (0) 1939 252312 Fax: +44 (0) 1939 251118

Scan and email to: kharalambou@smithers.com Enrol online at: [www.rapratraining.com](http://www.rapratraining.com)
Conditions of Registration

Payment must be received prior to attending the event and can be paid in £ Sterling, € Euro or US $. NB: Credit card payments can only be taken in £ Sterling, unless payment is made online via our secure payment system.

The Course/Seminar Fee includes training course/seminar lecture notes, lunches and refreshments. Accommodation is not included in the fee.

Joining instructions i.e. a letter of confirmation, directions and hotel information will be sent upon receipt of your registration. Please contact the training administrator if you have not received these within 7 days of registration.

Cancellations

1. Cancellation terms for Courses/Seminars held at Shawbury:
   • Cancellations made up to 14 days or more before the requested course/seminar date will be refunded, less a 20% administration fee.
   • Cancellations made within 14 days of the course/seminar date will be subject to the FULL course fee and no refund will be given.

2. Smithers Rapra cannot be held responsible for delegate cancellations and ‘no-shows’ arising from situations beyond its control, e.g. failure to travel or attend owing to cancelled flights, missed connections, weather conditions, strikes etc., emergency or illness. Smithers Rapra may, at its discretion, provide a substitute event, or alternative date, if available.

Delegate Substitutions can be made at any time without incurring extra charge.

Transfers to later Course/Seminar Dates - this option only applies when more than one date is offered for the same course/seminar.
   • Requests to transfer to a later course/seminar date made up to 14 days or more before the requested course date will be accommodated, subject to availability of places on the new course/seminar date.
   • Requests to transfer to a later course/seminar date made within 14 days of the course date will be regarded as a cancellation and will be subject to the FULL course fee. No refund will be given.
   • The option to transfer can be used only once, after which non-attendance will be treated as a cancellation and all outstanding invoices will be due.

Amendments to Programmes

Smithers Rapra reserves the right to cancel or modify any event in its programme. In the event of a cancellation where an alternative cannot be provided, payment received in respect of that course will be refunded in full.

The liability of Smithers Rapra is limited to the reimbursement of the course/seminar fee.

Smithers Rapra
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www.smithersrapra.com

Delivered by experts who understand the challenges faced by those working in the industry, courses are held throughout the year at Smithers Rapra’s European HQ in Shropshire. We also offer in-company bespoke training covering polymeric materials and technology to provide support for product developers and manufacturers across all industry sectors.