

Introduction to Plastics Technology

2 Day Course

to be held at **Smithers Rapra, Shawbury, UK**

22-23 February 2011

20-21 September 2011

*Smithers Rapra Training
- supporting people in
manufacturing from design to
production with plastics and
rubber materials technology,
quality management and
business improvement
training*



www.rapra.net
www.rapratraining.com

Introduction to Plastics Technology

This course has been developed for people with little or no knowledge of plastics, who either work in plastics manufacturing or companies which supply to, or purchase from, plastics manufacturers. The 2-day course will introduce participants to the fundamentals of plastics technology. No formal qualifications are needed and the course is pitched at a level suitable for technicians or senior managers.

Who will benefit?

- People working in plastics production, materials supply and other industries which supply to or purchase from plastics manufacturers
- Newcomers to these industries, or those who have had no formal technical training, as well as managers and professionals in areas such as sales, marketing and other roles where a knowledge of plastics materials and processing technologies would improve confidence and communication with customers, suppliers and colleagues.

Objectives

As a result of attending the course participants will gain a thorough grounding in:

- Basic polymer science relative to understanding plastics
- The properties of plastics materials and their relation to other materials
- The role of additives
- The technologies by which plastics are processed into finished products
- Why certain plastics are used in various applications

Contents

Basic polymer science – The structure of plastics (thermoplastics and thermosetting plastics) relative to properties and processing: characterisation tests.

Plastics materials: properties–The physical and chemical properties of commodity and engineering thermoplastics and thermosetting plastics, compared with other materials.

Additives: *The function of additives:* stabilisers; plasticizers; fillers; flame retardants; pigments and others, together with the major suppliers.

Applications: *the plastics used for* packaging, construction, household, automotive, electrical and electronic, agriculture and other sectors.

Processing –*The principles of processes for thermoplastics and thermosetting plastics:* **thermoplastics:** injection, blow and rotational moulding; extrusion: film; pipe; profile; wire and cable; coating; thermoforming: other processes: calendaring; dip coating; **thermosetting plastics:** compression and injection moulding; foam processes; fibre reinforced plastics processes and others.

Plastics and the environment: recycling; ecology; legislation.

Future developments: new materials and processes.

Fee

£550.00 + VAT for 2 day course, to include extensive lecture notes, lunch and refreshments.

Presenters

Joy Harrison, BSc (Eng), FIMMM, Consultant, Smithers Rapra

Andrew Hulme, BEng, PhD, AMIMMM, Consultant, Smithers Rapra

Michael Lock, BSc, CSci FIMMM, Consultant, Smithers Rapra

Conditions of Registration

Registration can only be accepted if made in writing, by fax, post or on our secure website: www.rapratraining.com

Payment

Must be received prior to attending the course and can be made in **£Sterling, E Euro or \$US**.

Course fee includes course notes, lunches and refreshments. Accommodation is not included. However, Smithers Rapra has negotiated rates with several hotels nearby. Details will be sent on confirmation of booking.

Cancellations and Transfers

Please note, we endeavour to accommodate our delegates' requests, however, most of our courses have limited numbers to maximise the interactivity between delegates and tutors. Cancellations or transfers at late notice may jeopardise the commercial viability of the course. For this reason we are obliged to charge the following administration fees or surcharges.

Cancellations made up to 14 days or more before the requested course date will be refunded, less a 20% administration fee.

Requests to transfer made up to 14 days or more before the requested course date will

be accommodated, subject to availability of places on the new course date and transfer conditions, see below.

Cancellations and requests to transfer made within 14 days of the course date will be subject to the FULL course fee and no refund will be given.

Transfer conditions

All requests to transfer must be confirmed in writing by the delegate requesting the transfer, or their booking representative. 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.

Smithers Rapra cannot automatically guarantee a place on the next scheduled course date.

Delegate substitutions can be made at any time without incurring penalty.

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.

Tailor-made Training Courses:

Courses can be delivered 'in-company' and tailored to your company's products and materials. Please contact The Training Business Manager at Smithers Rapra Technology, telephone +44(0)1939 250383 or e-mail training@rapra.net if you wish to discuss.

Smithers Rapra is centrally located (in the UK) on the A53 near the village of Shawbury about 7 miles (11km) North-East from Shrewsbury in Shropshire, within easy reach of the M6 and M54 motorways, less than one and a half hours drive from Birmingham, Manchester and Liverpool airports and approximately 7 miles from the mainline railway station (Shrewsbury) which has regular rail services to Birmingham (New Street) and London (Euston).

A map giving directions will be sent on confirmation of booking.

Registration Form

Fax to
+44 (0)1939 251118

Please reserve a place on the Introduction to Plastics Technology Course (please use one form per delegate, photocopies are acceptable):

22-23 February 2011 20-21 September 2011

Surname.....Title.....
Forename
Job Title/Position
Company

Contact Address

Address.....
.....
.....
.....
Telephone.....
Fax.....
Email.....

Invoice Address (if different)

Company.....
Address.....
.....
.....
Telephone.....
Fax.....
Email.....

Payment Information

Payment must be received prior to attending the course and can be made in £ Sterling, € Euro or \$US.

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 (if required)
 Cheque/Bank Transfer

Credit Card Payment: MasterCard Visa American Express (please indicate)

Expiry Date:

Signature

Name on Credit Card (in CAPITALS)

Security Number (as printed in signature box on reverse of card)

Cancellation Terms: By completing and returning this form delegates are agreeing to be bound by conditions of registration.

Return to:

Gill Tunnicliffe, Training Dept, Smithers Rapra Technology Limited, Shawbury, Shrewsbury, Shropshire, SY4 4NR, United Kingdom.

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Enrol online at:

www.rapratraining.com