

## Plastic Materials in Packaging -

A One Day Introductory Course - 8th November 2011

This one day course will provide delegates with detailed information on the properties of thermoplastics commonly used within the healthcare and food packaging sector with particular focus on Polystyrene, PET, Polyethylene and Polypropylene. We will discuss the types of polymer additives available to help with processing and will explore the range of additives and coatings that are being used to improve barrier properties and shelf life such as the SiOX process. This course assumes that you already have a basic appreciation of polymer processing and materials and aims to build on your existing knowledge. This course will be delivered by experts each who have been working in the plastics industry for over 25 years.



### Who should attend

Packaging Technologists

Account Managers

Packaging and Product Designers

Project Managers

Tooling Engineers

Purchasers & Buyers

Quality Assurance & Control Personnel

New Product Development Personnel

### Course Content

#### Introduction to common thermoplastics -

- Chemical structure
- Effect of structure on properties
- Semi crystalline polymers
- Amorphous polymers
- Tg and Tm
- MFI

#### Common thermoplastics -

PET (Polyethylene Terephthalate)  
HIPS (High Impact Polystyrene)  
PE (Polyethylene)  
PP (Polypropylene)

- Structure
- Properties
- Uses, practical examples
- Advantages and drawbacks

#### Flow length to wall thickness ratios -

- Understanding the effect of wall thickness on length of flow for different polymers and how it affects hot runner design.

#### Polymer additives -

- Lubricants and processing aids
- Pigments
- UV Stabilizers
- SiOX Coating for CO2 barrier properties

#### Biodegradable polymers in packaging -

- corn starch
- new innovations

#### Selecting and specifying a polymer combination -

- Use
- Cost
- Availability
- FDA/Medical considerations
- Sterilisation considerations

By the end of this interactive course you will be able to :

- Understand the relationship between polymer structure and its effect on the properties of common packaging thermoplastics.
- Appreciate where additives or coatings can be useful.
- Recognise the importance of knowing about material flow length to wall thickness ratios.
- Understand the current landscape regarding biodegradable polymers.
- Create a material requirements specification document taking all factors into consideration.

Booking Price **£495** +VAT

Fee includes a full set of course documentation as well as refreshments and lunch

Venue: Nottingham, UK. For further details or to register: Email: [training@designcognition.com](mailto:training@designcognition.com) or

Telephone: +44 (0) 115 846 1914 or Visit: [www.designcognition.com/training](http://www.designcognition.com/training)

(NB places cannot be reserved without full payment)