



Smithers Rapra Publications

2012 Publishing CATALOGUE

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Hello...

Presenting the 2012 publications catalogue from Smithers Rapra Publishing

With more than three decades of experience in producing scientific, technical and market information for the polymer, plastics and rubber industry we have become distinguished in this expert area of publishing. In more recent years, we have built up a best selling list of pharmaceutical titles to add our extensive range of polymer products.

Some key titles to watch for in 2012 include:

- Physical Testing of Plastics
- Biotechnology in Bioplastics
- Practical Guide to Rotational Moulding, 2nd Edition

Our Pharma collection of titles proved to be more popular than even we anticipated and we look forward to bringing you the latest in this collection. Keep a look out for 'Advances in Nanofibre Research, Volume 2' later this year, the second part to the highly successful title from last year. This year looks to be even busier than the last, with the Smithers Group recent acquisition of PIRA. This has been a fantastic opportunity to strengthen the information resources and bring you a wider range of eBook titles, with topics as diverse as 'Food Contact Regulations in Emerging Markets' to 'Novel Applications for TiO2'.

In the following pages, we have highlighted titles that are to be released in the first half of this year. And, as always, we have provided details of our backlist from 2005 onwards. We hope you'll find something of interest and if you have any questions we're more than happy to help.

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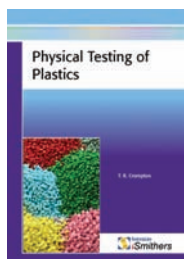
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**New and
Forthcoming
Titles ▶▶**

New & Forthcoming TITLES

Physical Testing of Plastics



Author:
T. R. Crompton

REACH for the Polymer Industry - A Practical Guide

Author:
Polymer REACH Consortium

This book discusses the physical rather than the chemical examination of the properties of polymers on the basis of the type of equipment used, examples of the applications of these techniques are given.

Techniques examined include thermal analysis (thermogravimetric analysis and evolved gas analysis), dynamic mechanical analysis and thermomechanical analysis, dielectric thermal analysis, ESR, MALDI, luminescence testing, photocalorimetry testing and the full range of equipment for mechanical, thermal, electrical, rheological, particle size, molecular weight.

PUBLICATION DATE: JANUARY 2012

FORMAT: HARDBACK	ISBN: 9781847354853	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847354860	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847354877	GB: £125.00	US: \$205.00	EU: €155.00

This book has been produced by the EU Leonardo Project called Polymer REACH. The overall objective of Polymer REACH was to develop an e-learning platform and training materials for the European polymer industry to learn and understand how to manage their obligations under the European legislation - Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

This book forms part of the training materials which will complement the industry specific e-learning platform to enable the polymer industry to learn how to manage their obligations under REACH. The overall impact will be an increase in the knowledge base of the polymer industry on REACH, which will in turn help to increase competitiveness and sustainability of the sector.

This book will be useful to anyone who works with polymers or the chemicals that are used to make polymers, whether they are end-users or suppliers. REACH is affecting everyone concerned with the polymer industry and this book will help them to prepare for the impact and consequences of the REACH legislation.

PUBLICATION DATE: JANUARY 2012

FORMAT: HARDBACK	ISBN: 9781847356215	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847356215	GB: £50.00	US: \$85.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847356222	GB: £75.00	US: \$125.00	EU: €95.00

New & Forthcoming TITLES

A Practical Guide to Energy Management for Managers

Author:
Energywise Consortium

A Practical Guide to Energy Management for Processors

Author:
Energywise Consortium

Do you know how best to manage and reduce your energy consumption? This book gives comprehensive guidance on effective energy management for organisations in the polymer processing industry. This book is one of three which support the ENERGYWISE Plastics Project eLearning platform for European plastics processors to increase their knowledge and understanding of energy management.

Topics covered include:

- Understanding Energy
- Energy Management
- Cost of Ownership
- Leadership and Awareness
- Case Studies

The other two books in this series are: Practical Guide to Energy Management for Processors and Practical Guide to Energy Management of Facilities and Utilities.

PUBLICATION DATE: JANUARY 2012

FORMAT: HARDBACK	ISBN: 9781847355911	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847355928	GB: £50.00	US: \$85.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847355935	GB: £75.00	US: \$125.00	EU: €95.00

Do you want to reduce energy consumption when plastics processing?

This book gives comprehensive guidance on effective energy management for organisations in the polymer processing industry.

This book is one of three which support the ENERGYWISE Plastics Project eLearning platform for European plastics processors to increase their knowledge and understanding of energy management.

Topics covered include:

- Injection Moulding
- Extrusion
- Rotational Moulding
- Compression Moulding
- Moulds and Tooling
- Other Processes

The other two books in this series are: Practical Guide to Energy Management for Managers and Practical Guide to Energy Management of Facilities and Utilities.

PUBLICATION DATE: JANUARY 2012

FORMAT: HARDBACK	ISBN: 9781847355942	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847355959	GB: £50.00	US: \$85.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847355966	GB: £75.00	US: \$125.00	EU: €95.00

A Practical Guide to Energy Management of Facilities and Utilities

Author:
Energywise Consortium

Do you know how to implement an energy management strategy for your facilities and utilities?

This book gives comprehensive guidance on effective energy management for organisations in the polymer processing industry.

This book is one of three which support the ENERGYWISE Plastics Project eLearning platform for effective energy management of facilities and utilities by the European plastics processing industry.

Topics covered include:

- Heating and Lighting
- Cooling and Space Ventilation
- Compressed Air
- Bills and Meter Readings
- Energy Saving in the Office
- Motors

The other two books in this series are: Practical Guide to Energy Management for Processors and Practical Guide to Energy Management for Managers.

PUBLICATION DATE: JANUARY 2012

FORMAT: HARDBACK	ISBN: 9781847355973	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847355980	GB: £50.00	US: \$85.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847355997	GB: £75.00	US: \$125.00	EU: €95.00

New & Forthcoming TITLES

Rosin-based Chemicals and Polymers

Edited by:
Jinwen Zhang

Rosin is an abundantly available natural product composed of around 90% acidic and 10% neutral compounds and it (and its derivatives) have long been used as tackifiers in adhesives. They have also found other niche applications in inks, varnishes, paints, sealing wax, some soaps, food additives, etc. Most of these conventional applications of rosin utilise its inherent physical properties, but in recent years there has been a growing interest in using rosin acid-derivatives as building blocks in the synthesis of polyesters, polyurethanes, epoxies and curing agents. In addition, rosin acid derived chemicals are used as nucleating agents, surfactants, drugs and in other special applications. This book brings together a collection of scientific articles on the recent research and development of utilising natural chemicals from pine resin as feedstock for polymers and new industrial chemicals. It focuses mainly on the new use of rosin acids, but also covers the applications of other chemicals from tree sap such as terpenenes. This book provides researchers in both academia and industry considerable material on the latest developments in the utilisation of rosin and terpenenes.

PUBLICATION DATE: JANUARY 2012				
FORMAT: HARDBACK	ISBN: 9781847355041	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355058	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355065	GB: £125.00	US: \$205.00	EU: €155.00

Food Packaging and Food Alterations: The User-oriented Approach

Author:
Salvatore Parisi

The Hazard Analysis and Critical Control Points is well known in the food industry in relation to the management of microbiological, chemical and physical risks. With relation to HACCP risks, packaging materials should be studied and recognised as one of key factors affecting food safety.

HACCP studies highlight the role of food productions, but detailed information about packaging materials is needed. This lack of information is very evident for Official Inspectors (Hygiene and Preventive Medicine), Veterinary Auditors and Food Operators. Consequently, the role of food packaging is known but its implications are often difficult to be understood.

Food Packaging and Food Alterations provides detailed and comprehensible information about packaging materials. Food Operators and Official Inspectors are not accustomed to understanding similar concepts (chemical and physical properties, marketing, QC failures). Consequently, a descriptive approach used to explain the world of packaging materials, differences between various packaging categories/subclasses and regulatory implications (REACH, BRC-IoP, etc.).

This book also provides the reader with a detailed selection of food failures and different causes:

- The incorrect design of package materials, or
- The incorrect storage and use of package materials, or
- Lack of technical information, or
- Synergetic effects (packaging & food-related causes).

Every situation is described and analysed with the aim to provide a reliable diagnosis of the problem (microbial spreading, alteration of shelf-life values, unpleasant appearance, possible safety problems).

This volume is intended as a practical guide on food packaging and HACCP implications and a quick reference to Official Safety Inspection bodies, students and researchers from academia and industry.

PUBLICATION DATE: FEBRUARY 2012				
FORMAT: HARDBACK	ISBN: 9871847356062	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9871847356079	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9871847356086	GB: £125.00	US: \$205.00	EU: €155.00

New & Forthcoming TITLES

Thermal Stability of Polymers

In recent years numerous research papers have been published on the changes in chemical structure and in physical properties of polymers when they are exposed to heat over a range of temperatures. For example, these changes can occur at any time during the injection moulding of the plastic, in the subsequent processing and in its end-use application when exposed to elevated temperatures. Thermal stability is a very important parameter which must be taken into account when selecting polymers, whether for their use in construction or engineering applications or in the packaging of food at high temperatures. The mechanisms by which such changes occur are many and it is important to know what these are and to be able to measure the rate of change of polymer structure and its dependence on temperature and time. Development of an understanding of the mechanisms of thermal degradation will help the chemist to develop materials with better thermal stability. This is particularly important in newer developments in engineering and aerospace. This book reviews the measurement of these properties in the main types of polymers in use today. Numerous techniques are discussed ranging from thermogravimetric analysis, differential scanning calorimetry, infrared and nuclear magnetic resonance based methods to pyrolytic techniques such as those based on pyrolysis, gas chromatography and mass spectrometry. The book is aimed at those engaged in the manufacture of polymers and the development of end-use applications. It is essential that students of polymer science should have a thorough understanding of polymer stability and an additional aim of the book is to help in the development of such an interest.

Author:
T. R. Crompton

PUBLICATION DATE: MARCH 2012

FORMAT: HARDBACK	ISBN: 9781847355133	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355140	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355157	GB: £125.00	US: \$205.00	EU: €155.00

Practical Guide to Structures, Properties and Applications of Styrenic Polymers

Authors:
Norbert Niessner,
Daniel Wagner

Styrenic polymers are amongst the economically most important plastics. They combine benign processing with a variety of product properties – from stiff and transparent, to tough and weatherable. The fact that styrene can be polymerised by different reaction mechanisms (radical, ionic and metal catalysed) makes this line of products unique regarding variety of properties and applications.

This book explains the basic structure/property relationships of styrenic polymers using polystyrene as example. Polystyrene is the first representative of styrenic polymers and gained importance in applications like food packaging or foams. By copolymerizing styrene with acrylonitrile, a whole new series of product lines open up, called the styrene copolymers. Examples of these copolymers are used in applications like automotive interior and exterior parts, computer and printer housings and toys. The styrene/butadiene copolymer lines are mostly transparent, stiff and/or tough products used in transparent food packagings or diverse injection moulded parts.

The great variety of styrenic polymer applications stem from the multitude of structures possible on molecular and mesoscopic level. Styrenic polymers are used in the following key industries:

Automotive and transportation, building and construction, consumer goods, IT, domestic appliances (white goods, computer, communication), leisure/sports, medical and cosmetics, and packaging.

The objective of this book is to present current understanding of the structure/property relationship of styrenic polymers and explain them based on selected examples. By understanding basic chemistry, supermolecular assembly of block- and graft polymers and microscopic fracture mechanisms, the reader will be able to quickly derive the properties of particular polymers and hence select the most suitable polymer for a given application.

This book provides a brief but comprehensive overview about the structure-property relationship of major styrenic polymer classes. Through this detail, it will contribute to the reader's better understanding of the specifics of these products. It will serve as a useful volume for technical product managers as well as processors (injection moulders, extrusion manufacturers). In addition, by providing basic insight into recent developments in the field, it will be useful for students and academics.

PUBLICATION DATE: MARCH 2012

FORMAT: PAPERBACK	ISBN: 9781847355652	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847356918	GB: £55.00	US: \$90.00	EU: €70.00

New & Forthcoming TITLES

Advances in Nanofibre Research Volume 2



Authors:

Akbar K. Haghi,
Gennady Zaikov

Practical Guide to Hydrogenated Nitrile Butadiene Rubber Technology

Author:

Robert Keller

Nanomaterials are the study of how materials behave when their dimensions are reduced to the nanoscale. It can also refer to the materials themselves that are used in nanotechnology. Materials reduced to the nanoscale can suddenly show very different properties compared to what they exhibit on a macroscale, enabling unique applications.

The book offers scopes that have potential for applications in several disciplines of nano materials. Chapter range from new methods to novel applications of existing methods to gain understanding of the material and/or structural behaviour of new and advanced systems. In view of the different background of the expected audience, readers are requested to focus on the main ideas, and to highlight as much as possible the specific advantages that arise from applying modern ideas. A chapter may therefore be motivated by the specific problem, but just as well by the advanced method used which may be more generally applicable.

The collection of topics in this volume reflect the diversity of recent advances in nanofibres with a broad perspective which will be practical for scientists as well as graduate students and engineers.

PUBLICATION DATE: MARCH 2012

FORMAT: HARDBACK	ISBN: 9781847356796	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847356802	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847356819	GB: £120.00	US: \$200.00	EU: €150.00

Hydrogenated Nitrile Butadiene Rubber (HNBR) is a synthetic polymer that results from the hydrogenation of Nitrile Rubber (NBR). It is widely known for its physical strength and retention of properties after long-term exposure to heat, oil, and chemicals. The unique properties attributed to it have resulted in wide adoption of HNBR in automotive, industrial, and assorted, performance-demanding applications.

This Practical Guide covers everything from the manufacture of HNBR to processing in the finished part production facility. This book forms a complete guide for the practicing rubber formulator or process engineer dealing with HNBR technology.

PUBLICATION DATE: MARCH 2012

FORMAT: PAPERBACK	ISBN: 9781847355218	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847355225	GB: £55.00	US: \$90.00	EU: €70.00

Advances in Polymer Coated Textiles

Polymer coated textiles are known as engineered composite materials at macro scale. Coating can offer significant improvements to the substrate, mainly of the physical (like impermeability and fabric abrasion) and/or of overall chemical properties; as well as the appearance, by combining advantages of the components.

Polymer coated systems employ various kinds of textile substrate structures available, mostly of technical textiles. Since there are a number of possibilities for different types of polymers and their combinations, textile structures as well as their combinations are possible; it is widely open to creativities and almost every day some new innovative application is being introduced. Polymer coated textile industry, being parallel to the developments in the textile research, is so dynamic that, today, applications like reactive coatings with nanoparticles (with self cleaning, self sterilizing surfaces), systems with conductive polymer coatings to provide EM shielding, electronic textile systems -with body monitoring properties-, environmental responsive systems etc. are already somewhat classical and are considered almost left in the shade of incoming new developments.

This book is an up-to-date summary of the subject by considering the passage from conventional to emerging technologies. Criteria for selection of the coat and textile are considered and the manufacturing basics of the system are summarized. Emerging technologies and applications (including smart, intelligent and nanostructured applications) are completed by testing and quality control methods of these systems.

The book is written for all that are interested in this interdisciplinary area, it certainly will prove to be of great help to textile and polymer technologists, to engineers, to scientists, as well as to students.

Authors:

Güneri Akovali,
Bireswar Banerjee,
A K Sen

PUBLICATION DATE: APRIL 2012

FORMAT: HARDBACK	ISBN: 9781847354976	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847354983	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847354990	GB: £125.00	US: \$205.00	EU: €155.00

New & Forthcoming TITLES

Practical Guide to Rotational Moulding, 2nd Edition

Authors:

Roy J. Crawford,
Mark P. Kearns

Rotational moulding (also called rotomoulding or rotocasting), is a very competitive alternative low pressure, high temperature manufacturing method to blow moulding, thermoforming and injection moulding for the manufacture of hollow plastic parts. It offers designers the chance to produce relatively stress-free articles, with uniform wall thickness and potentially complex shapes. This 2nd Edition of the very popular Practical Guide to Rotational Moulding describes the basic aspects of the process and the latest state-of-the-art developments in the industry. It is completely revised and is extensively illustrated. This guide will be of interest to both students of polymer processing and those who work with rotational moulding equipment.

PUBLICATION DATE: APRIL 2012

FORMAT: PAPERBACK	ISBN: 9781847355119	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847355126	GB: £55.00	US: \$90.00	EU: €70.00

Biotechnology in Biopolymers

This comprehensive book provides up-to-date information on the developments in the field of biopolymers. Close attention has been paid to include all the important aspects that are necessary to understand the field. The book introduces the reader with the progress in the field, followed by outlining its applications in different areas. Different methods and techniques of synthesis and characterization are detailed as individual chapters. Various mode and mechanism of degradation of materials will be discussed. There is a dedicated chapter on industrially available biopolymers and their applications and well as a chapter detailing the ongoing research, current trends and future challenges.

Unlike other books, this book consists of information that is useful for students who are interested in biotech and polymer research. Each chapter will explain the science and technology from the inception to advance state of the art available to date. This book will also be useful for the researcher involved in the high-tech research as it will provide them the up-to-date information available in this field.

PUBLICATION DATE: APRIL 2012

FORMAT: HARDBACK	ISBN: 9781847355423	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355430	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355447	GB: £125.00	US: \$205.00	EU: €155.00

Authors:

Atul Tiwari,
Ravi B. Srivastava

Update on Polymers for Pulmonary Drug Delivery

Authors:

Hugh D. C. Smyth,
Jason McConville,
Ibrahim El-Sherbiny

Pulmonary drug delivery has been a rapidly expanding field, moving from the traditional propellant based metered dose inhaler delivery of small asthma drugs, to a broader landscape of new devices and novel drugs for local and systemic delivery. The field has greatly expanded yet the tools for pulmonary drug delivery systems have not kept pace with the potential applications. One of the key developments has been the use of polymers to achieve better control of pulmonary drug delivery. This has the potential to expand the toolbox available for researchers in the field to deliver their new chemical entities successfully to the lung. This book reviews the use of polymers in pulmonary drug delivery, encompassing polymers from their use in devices and packaging, in addition to their use as excipients in formulations delivered to the airways. The book is arranged by application and extensively reviews the technical and patent literature. This is the first volume totally dedicated to polymers in pulmonary drug delivery and should be the resource of choice for those in the field, especially managers in the pharma/biotech industry. Naturally, the text will be of great interest to academics and graduate students. Finally, regulatory affiliated scientists will also find this resource invaluable.

PUBLICATION DATE: APRIL 2012				
FORMAT: PAPERBACK	ISBN: 9781847356536	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847356550	GB: £80.00	US: \$130.00	EU: €100.00

New & Forthcoming TITLES

Healthcare Sterilisation: Back to the Future and Scientific Wizardry

Author:
Wayne R. Rogers

The magic of sterilisation is more than just the inactivation of all biological organisms. The process occurs focusing only on the intended infectious entities, materials and wastes. It is an interdisciplinary integration of biology, chemistry, engineering and statistics.

The first objective of this book is to expand the scope of sterilisation and sterility into environmental control and microbiology. Also, how product design, materials and polymers interrelate to sterilization and sterility assurance.

The second objective is to provide some wizardry on how to release processed materials and product in a specific time, to improve processing and regulatory criteria and any future aspects.

The final objective of this book is to provide technical information to operators and to the management of sterilisation activities. The historical background of sterilisation is discussed, as well as science and technical information and training to operators, technicians and 'related' professionals in this area (e.g., Auditors, Quality Control, Assurance, Notified Bodies and Regulators, Polymer Chemists and Engineers).

PUBLICATION DATE: MAY 2012				
FORMAT: HARDBACK	ISBN: 9781847354525	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847354532	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847354549	GB: £120.00	US: \$200.00	EU: €150.00

New & Forthcoming TITLES

Design of Extrusion Forming Tools

Edited by:

Olga Carneiro,
Joao Miguel Nobrega

Carbon Nanotube Based Composites: Processing, Properties, Modelling and Application

Author:

Antonio Pantano

The design of extrusion forming tools (dies and calibrators) is a difficult task usually performed by the employment of experimental trial-and-error procedures, which can hinder the performance and cost of the tools, may increase the time to market of new extruded products and limit their complexity. This book provides detailed information on the design of extrusion forming tools offering key insight on this topic. It describes the main problems faced when designing dies and calibrators, the most relevant polymer properties to consider in the design process, the specific problems that relate to several types of conventional extrusion dies, and recent developments on the design of special dies and process modeling. It will be an updated and uncommon book on the subject, where each chapter is prepared by internationally recognized experts. With this in mind, it will be a useful reference book for higher education students (both undergraduate and graduate), teachers, researchers and engineers active in the extrusion industry.

PUBLICATION DATE: MAY 2012

FORMAT: HARDBACK	ISBN: 9781847355171	GB: £125.00	US: \$200.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355188	GB: £100.00	US: \$160.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847355195	GB: £125.00	US: \$200.00	EU: €155.00

Carbon nanotubes (CNTs) have amazing properties and a key way to take advantage of this is by incorporating nanotubes into a matrix to build composite materials. The best candidates for this task are undoubtedly polymers. Almost every characteristic of a polymer can be significantly enhanced by adding carbon nanotubes and as a result, new potential applications of carbon nanotube enhanced polymer composites are discovered every day. However, before carbon nanotube enhanced polymer composites become commonplace there are some tough challenges that need to be overcome. This book reviews the status of worldwide research in both single-walled and multi-walled carbon nanotube based composites. It serves as a practical guide on carbon nanotube based composites and a reference to students and researchers from the academia and industry.

PUBLICATION DATE: MAY 2012

FORMAT: HARDBACK	ISBN: 9781847355850	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355867	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355874	GB: £125.00	US: \$205.00	EU: €155.00

New & Forthcoming TITLES

Update on Chitosan

Among the various natural polymer based gene delivery vectors, chitosan is the most prominent because of its biodegradability, biocompatibility and cationic potential. Chitosan, being a linear cationic polysaccharide, consists of 1194 linked glucosamine partly containing N-acetylglucosamine. It was first described as a delivery system for plasmids by Mumper's group in 1995. The role of chitosan in gene delivery was supported by its ability to protonate in acidic conditions and to form complexes with anionic DNA by electrostatic interactions. The biodegradable cationic polymer chitosan is capable of forming small and stable toroidal complexes with plasmid DNA and provide protection against DNase that is comparable to PEI. Due to the presence of easily modifiable primary amino group present in chitosan, several research groups have conducted numerous modifications to the polymer structure. In the present book, we are trying to explore various modifications of chitosan and its application in the field of gene delivery.

Authors:

Chandra P. Sharma,
Viola B Morris

PUBLICATION DATE: MAY 2012

FORMAT: HARDBACK	ISBN: 9781847356666	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847356680	GB: £80.00	US: \$130.00	EU: €100.00

Endocrine Disruptors 2012

These proceedings cover all of the presentations from Smithers' Endocrine Disruptors 2012 conference, which addressed key topics related to the evaluation of adverse effects on the endocrine system and corresponding regulatory requirements. Building on the success of the inaugural conference which highlighted the environmental effects, the 2012 event focused on the evaluation of the effects on human health. The conference brought together experts from academia, regulatory bodies, and industry from around the globe.

Compiled by:
Smithers Rapra

PUBLICATION DATE: MAY 2012

FORMAT: HARDBACK	ISBN: 9781847357236	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847357243	GB: £100.00	US: \$165.00	EU: €125.00

Thermal Methods of Polymer Analysis

Author:
T. R. Crompton

Thermal analysis is a technique used in materials science where the properties of materials are studied as they change with temperature. There are a number of methods used, and these include: Dielectric thermal analysis (dielectric permittivity and loss factor), Differential scanning calorimetry (heat difference), Differential thermal analysis (temperature difference), Dilatometry (volume), Dynamic mechanical analysis (mechanical stiffness and damping), Evolved gas analysis (gaseous decomposition products), Pyrolysis – gas chromatography – mass spectroscopy, Thermogravimetric analysis (mass), Thermomechanical analysis (dimensions), and Thermo-optical analysis (optical properties).

There are some less-commonly used methods which measure the sound or light emission from a sample, or the electrical discharge from a dielectric material, or the mechanical relaxation in a stressed specimen. In all these techniques the sample's response is recorded as a function of temperature (and time).

Polymer analysis is an area in which thermal analysis is frequently used. Thermoplastic polymers are commonly found in everyday packaging and household items, but for the analysis of the raw materials, effects of the many additives used and fine-tuning of the moulding or extrusion processing used can be achieved by using thermal analysis methods.

This book gives an up-to-date and thorough description of the state-of-the-art of the theory and availability of the instrumentation needed for the thermal analysis of polymers. This book will be of great interest to those with an interest in the subject in industry, in academic research or in education.

PUBLICATION DATE: MAY 2012

FORMAT: HARDBACK	ISBN: 9781847356611	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847356628	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847356635	GB: £125.00	US: \$205.00	EU: €155.00

New & Forthcoming TITLES

The Electrospinning Practical Guide to Electro- spinning in the Laboratory

Author:
Nick Tucker

Electrospinning is a technique which can trace its origins to the early 1500s, however, it was only in the mid-1990s that there was a resurgence of interest in this technique and since then a lot more research has been done on this topic.

Electrospinning uses an electrical charge to draw very fine fibres from a liquid. It shares the characteristics of both the commercial electrospray technique and the commercial spinning of fibres. The technique results in the formation of uniform fibres with nanometer-scale diameters from often quite complex molecules. The fibres produced have a very high surface to volume ratio, and a relatively defect free structure at the molecular level. This first property makes electrospun material suitable for applications requiring a high degree of physical contact, such as providing sites for chemical reactions or the capture of small sized particulate material by physical entanglement, for example, filtration. The second property allows electrospun fibres to approach the theoretical maximum strength of the spun material, making them ideal for producing high mechanical performance composite materials.

This Practical Guide covers: the history and theory of the technique, a description of the process and apparatus used, materials used, and information on patents and applications.

This book will be of interest to anyone interested in an up-to-date and thorough description of the state-of-the-art of the electrospinning process, in industry, in academic research or in education.

PUBLICATION DATE: JUNE 2012

FORMAT: PAPERBACK	ISBN: 9781847355478	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847355485	GB: £55.00	US: \$90.00	EU: €70.00

New & Forthcoming TITLES

Electro-spinning for Advanced Biomedical Applications and Therapies

Edited by:
Nuno M. Neves

Polymers in Marine Environment

Edited by:
Mukesh Doble,
Ramasamy
Venkatesan

The main body of this work will focus in the development of electrospun membranes for advanced biomedical technologies including tissue engineering and drug delivery devices. Serving as a reference book for the beginner in the area, this book also provides an in-depth analysis of the challenges to be overcome in the future. Each section of the book covers not only the developments in the various fields of application of the electrospun meshes, but also the advances required for the successful development of new and high-end biomedical applications. Important areas tackled include focus in biomedical applications of the technology; covering specific aspects of equipments and materials; surface characterization and functionalization; and *in vitro* testing with electrospun meshes. In all of these areas the main achievements, challenges ahead and expert opinion are given, making this publication highly unusual in the level of detail covered.

PUBLICATION DATE: JUNE 2012				
FORMAT: HARDBACK	ISBN: 9781847356000	GB: £150.00	US: \$250.00	EU: €190.00
FORMAT: PAPERBACK	ISBN: 9781847356017	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: EBOOK	ISBN: 9781847356024	GB: £150.00	US: \$250.00	EU: €190.00

Biofouling is a serious problem on polymers that are immersed in marine waters for extended periods of time. Biofouling leads to problems to ships and boats in the form of reduced speed, corrosion, and biodegradation. Marine biofouling can be defined as the undesirable accumulation of microorganisms, plants, and animals on artificial surfaces immersed in sea water. Several hundred thousand tons of plastics are discarded into the marine environment every year. It has been estimated that one million marine animals are killed every year either by choking on floating plastic items or by becoming entangled in plastic debris. Marine debris, especially polymeric material, impacts the coastal and ocean environment severely on wildlife, aesthetics, coastal economics and overall environmental quality. Furthermore, the low availability of sunlight and dissolved oxygen for natural photo-oxidative degradation in the waters compared to that in the land also becomes a major hindrance for the degradation of these polymeric materials in the marine water. So the speeding up of the degradation processes of these polymers in the natural environment is a great challenge.

PUBLICATION DATE: MAY 2012				
FORMAT: HARDBACK	ISBN: 9781847355737	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355744	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355751	GB: £125.00	US: \$205.00	EU: €155.00

New & Forthcoming TITLES

Surface Engineering of Polymeric Biomaterials

Author:
Todorka G. Vladkova

Biomaterials work in contact with living matter and this raises a number of specific requirements to their surface properties, such as bio-inertness or bioactivity and anti-bio-fouling. They usually lack the materials used for biomedical device preparation, like implants, biosensors, micro-fluidics, etc. The current solution to the problem is the surface engineering aimed at the improvement of the bio-contact properties of such materials.

Tissue engineering, based on human cells seeding onto polymeric scaffolds is a new technique of very promising regenerative medicine with a potential to create tissues and organs de novo. The surface properties tailoring in this case is aimed at creation of biologically relevant microenvironments for the corresponding cells, because they are sensitive to the environment in which exist and respond to chemical cues and morphologic aspects of the surfaces with which they are in contact.

The main advantage of this book is that it will present the most recent state of the art in the field of the surface engineering of biomaterials for all main applications (artificial implants and organs, blood-contacting devices, biosensors, controlled drug delivery, microfluidics, tissue engineering). It also outlines the surface problems of the corresponding materials and the possible solutions by surface engineering based on known conventional and advanced methods.

PUBLICATION DATE: JULY 2012				
FORMAT: HARDBACK	ISBN: 9781847356581	GB: £125.00	US: \$200.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847356598	GB: £100.00	US: \$160.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847356604	GB: £125.00	US: \$200.00	EU: €155.00

New & Forthcoming TITLES

Latex and Synthetic Polymer Dispersions 2012

Compiled by:
Smithers Rapra

Silicone Elastomers 2012

Compiled by:
Smithers Rapra

The Smithers RAPRA's seventh international Latex & Synthetic Polymer Dispersions conference comes to Kuala Lumpur in 2012. This conference provides a unique opportunity to join fellow leaders in the field of latex, polymer dispersions, emulsion polymerisation and allied companies. From the preparation of the raw materials to the way in which finished product standards are applied, this conference will cover the whole range of the latex and polymer dispersion industries. The previous Smithers Rapra conferences on latex and synthetic polymer dispersions have attracted acclaim for the breadth and quality of the programme; this one promises to maintain the standard.

PUBLICATION DATE: JULY 2012

FORMAT: PAPERBACK	ISBN: 9781847357250	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847357267	GB: £100.00	US: \$165.00	EU: €125.00

Silicone elastomers have a unique combination of properties not found with organic elastomers. These include stability over a vast temperature range, good electrical properties and environmental resistance, no smell or taste, high biocompatibility, low softness without plasticisers, and high colourability and transparency. Despite their relatively high cost, silicone elastomers are increasingly being used for applications where durability and safety are particularly important such as automotive, electrical and electronic, domestic appliances, food processing, medical devices and baby bottle teats. These proceedings cover all the presentations from the conference which covered the whole range of silicone elastomer materials, including high temperature vulcanised (HTV), room temperature vulcanised (RTV) and liquid silicone rubber (LSR).

PUBLICATION DATE: MAY 2012

FORMAT: PAPERBACK	ISBN: 9781847357274	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847357281	GB: £100.00	US: \$165.00	EU: €125.00

Complete Title Listings▶▶

Compiled by:
iSmithers Rapra

Addcon 2009

Conference Proceedings

Europe's leading conference for the plastics additives and compounding industry is now in its fifteenth year. This conference saw cutting edge case studies on plastic additives, performance, processing and applications. Whether you're an additive supplier, compounder, manufacturer or end user of polymer materials, these proceedings provide an ideal opportunity to keep informed of quickly changing technical and market developments in the global plastics industry.

PUBLICATION DATE: 2009				
FORMAT: PAPERBACK	ISBN: 9781847353962	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

Addcon World 2005

Conference Proceedings

In this 2005 proceedings there are overview papers from experts on markets and market forces (particularly European legislation) and technical sessions on processing aids, stabilizers, flame retardants, compatibilisers (coupling agents) antimicrobials, compounding, and additives that affect surface properties.

PUBLICATION DATE: 2005				
FORMAT: PAPERBACK	ISBN: 9781859575307	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

Addcon World 2006

Conference Proceedings

This leading additives, modifiers and compounding conference saw papers presented on the latest additives, including stabilisers and research on the stability of plastics, antistatic and antifogging agents, nanocomposites, flame retardants, fillers, slip, repellents and biocides. There were also papers on innovative masterbatch technology.

PUBLICATION DATE: 2006				
FORMAT: PAPERBACK	ISBN: 9781847350039	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

Addcon World 2007

Conference Proceedings

These proceedings are packed with papers on the latest additives and their applications to industry, covering a broad range of subjects including innovations in reducing the dependence on halogenated flame retardant systems; the effects of nanofillers on the friction and wear properties of polymers; together with cutting edge developments in antimicrobials, antioxidants, heat stabilisers, light stabilisers and clarifiers.

PUBLICATION DATE: 2007

FORMAT: PAPERBACK	ISBN: 9781847350183	GB: £100.00	US: \$180.00	EU: €160.00
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Addcon World 2008

Conference Proceedings

Rising materials and energy costs, technical performance requirements and regulatory constraints mean that there is increasing pressure to employ the most effective and efficient plastics additive technology. Addcon 2008 provides research on the latest on REACH and the EU plastic legislation regarding additives as plasticisers and surface biocides, to the phenol free stabilisation of polyolefines and the compounding of new reactive TPEs to adhere to glass and metal.

PUBLICATION DATE: 2008

FORMAT: PAPERBACK	ISBN: 9781847350756	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

Advances in Nanofibre Research

Handbook

This book presents some fascinating phenomena associated with the remarkable features of nanofibres in electrospinning processes and new progress in applications of electrospun nanofibres. It also provides an overview of structure-property relationships, synthesis and purification, and potential applications of electrospun nanofibres. The collection of topics in this book aims to reflect the diversity of recent advances in electrospun nanofibres.

PUBLICATION DATE: 2011

FORMAT: HARDBACK	ISBN: 9781847356031	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847356048	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847356055	GB: £120.00	US: \$200.00	EU: €150.00

Authors:
Akbar K. Haghi,
Gennady Zaikov

Compiled by:
Adhesive and Sealant
Council, Inc.

Compiled by:
Adhesive and Sealant
Council, Inc.

ASC 2009 Pressure Sensitive Adhesives Conference Proceedings

Purchasers of this publication will benefit from the knowledge of the adhesive industry's brightest technical professionals, culled from leading adhesive manufacturing and supplier companies and well-known industry consulting firms. Featured presentations cover all facets of pressure sensitive adhesives. Topics include an introduction to PSA markets, PSAs and polymers as well as a detailed examination of the most popular types of PSAs-solvent-based, water-based, hot-melt and UV-cured. Tackifiers, plasticizers and formulation and selection techniques are also highlighted.

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847354310	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847354327	GB: £100.00	US: \$165.00	EU: €125.00

ASC 2009 Spring Convention and Expo Conference Proceedings

Assembled from the educational sessions at the ASC's bi-annual convention, this publication features technical papers presented by industry authorities who represent leading adhesive manufacturing and supplier companies and well-known industry consulting firms. The highly technical curriculum will provide readers with the latest adhesive and sealant trends and innovations. Featured information will help provide a better understanding of recent advancements in formulation technology, ways to improve manufacturing processes, "green" technologies and more-all designed to improve business performance and customer satisfaction.

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847354204	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847354297	GB: £100.00	US: \$165.00	EU: €125.00

Compiled by:
Adhesive and Sealant
Council, Inc.

Author:
Rapra Technology

ASC 2009 Waterborne Adhesives

Conference Proceedings

The ASC Waterborne Adhesives Proceedings presents information highlighting the leading waterborne adhesives in use today, advantages of using waterborne adhesives, recent developments in "green" chemistry, application and production equipment and various additives and other formulation techniques that can enhance products.

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847354341	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781843754358	GB: £100.00	US: \$165.00	EU: €125.00

Automotive Adhesives, Sealants and Coatings 2008

Conference Proceedings

A series of environmental and end-of-life regulations in the automotive sector has triggered changes in vehicle design and manufacture. The call for improved fuel efficiency and safety, increased passenger comfort, and a reduction in emission has seen the introduction of new materials and manufacturing techniques to develop lighter, more efficient vehicles. With these green challenges in mind, Smithers Rapra brought together the automotive supply chain to discuss the latest research and developments in this area and discover how today's automotive manufacturer can satisfy the conflicting demands of the consumer and the regulator.

PUBLICATION DATE: 2008				
FORMAT: PAPERBACK	ISBN: 9781847350725	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

Biocides in Plastics - From Preservation to Hygiene Control 2008

Conference Proceedings

The conference featured case studies from the likes of Arch Chemicals, PolyChem Alloy, Ciba Specialty Chemicals, Sanitised and Thor Specialities as well as a regulatory update from the US EPA. Papers provided insight into many key developments and solutions to the key issues of the biocides sector. These include: Test methods for plastics: antifungal and antibacterial testing; The harmonization of regulation for biocides for treated articles; How to implement an antimicrobial hygiene concept for appliances; Modelling the end-use of plastic treated articles to support label claims.

PUBLICATION DATE: JANUARY 2008

FORMAT: PAPERBACK	ISBN: 9781847350671	GB: £100.00	US: \$180.00	EU: €160.00
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Biocides in Synthetic Materials 2010

Conference Proceedings

These proceedings cover all the presentations from the conference which featured case studies from key industry players and provided insight into many key developments and solutions to the key issues of the biocides sector; including: Proposed changes in the regulation of biocides in the EU and their impact; The use of reactive silane chemistries to provide durable, non-leaching antimicrobial surfaces; Formaldehyde releasers as an example of in situ generated active substances; and more.

PUBLICATION DATE: JANUARY 2010

FORMAT: PAPERBACK	ISBN: 9781847355546	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847356574	GB: £100.00	US: \$165.00	EU: €125.00

Compiled by:
iSmithers Rapra

Blowing Agents and Foaming Processes 2005

Conference Proceedings

This 7th international conference was dedicated to blowing agents and process technology for foamed plastics and rubber. There are a good variety of papers on innovations in foaming technology and new applications of blowing agents, with sessions on foaming polyurethane and thermoplastics.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859575154	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

Blowing Agents and Foaming Processes 2006

Conference Proceedings

This 8th international conference was dedicated to the critical role of blowing agents in foamed plastics and rubber. Foamed materials are being enhanced to replace dense solid polymers, reducing weight and costs. Chemical & environmental legislation is constantly changing and the foams industry is adapting to meet demands.

Compiled by:
Rapra Technology

PUBLICATION DATE: JANUARY 2006

FORMAT: PAPERBACK	ISBN: 9781859575758	GB: £100.00	US: \$180.00	EU: €160.00
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Blowing Agents and Foaming Processes 2007

Conference Proceedings

The conference was dedicated to the critical role of blowing agents in foamed plastics and rubber. Foamed materials are being enhanced to replace dense solid polymers, reducing weight and costs. Chemical and environmental legislation is constantly changing and the foam industry is adapting to meet demands.

Compiled by:
Rapra Technology

PUBLICATION DATE: JANUARY 2007

FORMAT: PAPERBACK	ISBN: 9781847350152	GB: £100.00	US: \$180.00	EU: €160.00
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Blowing Agents and Foaming Processes 2008

Conference Proceedings

This conference has become firmly established in the plastics community as the meeting place for processors, material suppliers, academics and end users to exchange ideas and keep up to date with developments in this fast growing niche of the polymer sector. This conference was dedicated to the critical role of blowing agents in foamed plastics and rubber and included, amongst other things, commercial polymeric foams and their applications, their technologies and future industry trends.

Compiled by:
Rapra Technology

PUBLICATION DATE: JANUARY 2008

FORMAT: PAPERBACK	ISBN: 9781847350718	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
iSmithers Rapra

Blowing Agents and Foaming Processes 2010

Conference Proceedings

The 12th international Blowing Agents & Foaming Processes conference was developed to once again showcase the latest academic and industrial research shaping the future for so many industry applications. These proceedings cover all the presentations from the conference which include developments in chemical and physical foaming, new applications, novel processes, nano and standard substrates, particle foams as well as the industry's response to environmental legislation.

PUBLICATION DATE: JANUARY 2010

FORMAT: PAPERBACK	ISBN: 9781847354952	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357540	GB: £100.00	US: \$180.00	EU: €160.00

Chemistry and Technology of Polyols for Polyurethanes

Handbook

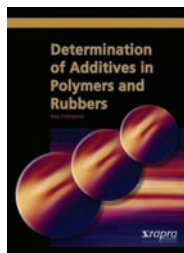
This book considers the raw materials used to build the polyurethane polymeric architecture. It covers the chemistry and technology of oligo-polyol fabrication, the characteristics of the various oligo-polyol families and the effects of the oligo-polyol structure on the properties of the resulting polyurethane. It presents the details of oligo-polyol synthesis, and explains the chemical and physico-chemical subtleties of oligo-polyol fabrication.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859675017	GB: £135.00	US: \$243.00	EU: €216.00
FORMAT: EBOOK	ISBN: 9781847350350	GB: £135.00	US: \$243.00	EU: €216.00

Author:
Mihail Ionescu

Author:
Stuart Fairgrieve



Author:
T. R. Crompton

Degradation and Stabilisation of Aromatic Polyesters

Smithers Rapra Updates

This book provides a comprehensive survey of the degradation and stabilisation processes specific to aromatic polyesters, including thermal, thermo-oxidative, chemical, light and radiation degradation and stabilisation. Current knowledge of all these aspects is discussed and analysed, and some suggestions made as to further studies which might advance the subject. Materials covered include well-known polyesters such as poly(ethylene terephthalate) and poly(butylene terephthalate), through the less well-known poly(alkylene naphthalate)s and liquid crystalline polyesters, to 'new' substances such as poly(trimethylene terephthalate).

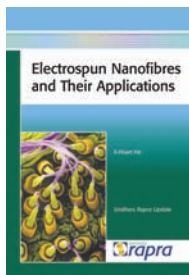
PUBLICATION DATE: JANUARY 2009				
FORMAT: HARDBACK	ISBN: 9781847350893	GB: £75.00	US: \$135.00	EU: €120.00
FORMAT: PAPERBACK	ISBN: 9781847354570	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847354587	GB: £75.00	US: \$135.00	EU: €120.00

Determination of Additives in Polymers and Rubbers

Handbook

This book is designed as a practical text for use in the laboratories of the plastic producer and user industries and by others such as universities and institutions who are concerned with problems associated with additives and adventitious impurities in polymers.

PUBLICATION DATE: JANUARY 2007				
FORMAT: HARDBACK	ISBN: 9781847350008	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847350220	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847350367	GB: £125.00	US: \$225.00	EU: €200.00



Electrospun Nanofibres and their Applications

Smithers Rapra Updates

This Update covers all aspects of electrospinning as used to produce Nanofibres. It contains an array of colour diagrams, mathematical models, equations and detailed references.

Electrospinning is the cheapest and the most straightforward way to produce nanomaterials. Electrospun Nanofibres are very important for the scientific and economic revival of developing countries. It is now possible to produce a low-cost, high-value, high-strength fibre from a biodegradable and renewable waste product for easing environmental concerns.

PUBLICATION DATE: JANUARY 2008

FORMAT: PAPERBACK	ISBN: 9781847351463	GB: £75.00	US: \$135.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847351456	GB: £75.00	US: \$135.00	EU: €120.00

Author:

Ji-Huan He

Epoxy Composites: Impact Resistance and Flame Retardancy

Rapra Review Report

The urge to improve the properties of composite materials has prompted materials scientists to investigate composites with lower and lower reinforcement size, leading to the development of microcomposites and the recent trend in composite research is nanocomposites (with nanometer scale reinforcements). Polymer matrix composite (PMC) can be processed at a much lower temperature, compared to composites with other types of matrix. In this present review, thermosetting composites with epoxy matrices will be discussed in detail.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781847351555	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350657	GB: £85.00	US: \$153.00	EU: €136.00

Author:

Debdatta Ratna

Compiled by:
iSmithers Rapra

Author:
Jiri G. Drobney

Compiled by:
Rapra Technology

Extractables and Leachables for Pharmaceutical Products 2010

Conference Proceedings

Impurities originating from any part of the manufacturing or storage of drug products can potentially result in expensive product recalls and damage to a company's reputation - not to mention the serious threat posed to patient safety. These proceedings cover all the presentations from the conference which provided a unique opportunity to learn about the latest developments from industry practitioners and working groups to meet regulatory requirements and ensure compatibility in drug-package combinations.

PUBLICATION DATE: JANUARY 2010

FORMAT: PAPERBACK	ISBN: 9781847355539	GB: £100.00	US: \$165	EU: €125
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Fluoroplastics

Rapra Review Report

The aim of this review is to acquaint the readers with the science and technology of fluoroplastics that represent a unique group of plastics used in many dynamic industries, including automotive, aerospace, wire and cable insulations, oil and gas recovery, semiconductor manufacture and others.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781847350077	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350312	GB: £85.00	US: \$153.00	EU: €136.00

Food Contact Polymers 2007

Conference Proceedings

Plastics and rubbers are used extensively in food processing applications and in packaging. This first international conference brought together the food processing supply chain to learn about new materials for manufacturing processes and packaging, material selection, testing, and issues facing the industry such as legislation.

PUBLICATION DATE: JANUARY 2007

FORMAT: PAPERBACK	ISBN: 9781847350121	GB: £100.00	US: \$180.00	EU: €160.00
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Handbook of Thermoset Resins

Handbook

Handbook of Thermoset Resins is designed as a stand-alone guide to thermoset resins, an important class of polymer materials. The book begins with a general introduction to thermoset resins – including network concept, curing, processing, and testing – and ends with thermoset nanocomposites, a subject of much current interest. The objective of Handbook of Thermoset Resins is to provide focused and detailed information on synthesis, characterizations, applications, and toughening of thermoset resins.

PUBLICATION DATE: JANUARY 2009

FORMAT: HARDBACK	ISBN: 9781847354105	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847354112	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847354129	GB: £125.00	US: \$225.00	EU: €200.00

Author:

Debdatta Ratna

High Performance and Speciality Elastomers 2005

Conference Proceedings

The unique properties of high performance elastomers are essential in hostile environments and application areas include the petrochemical and refining industries, automotive, aerospace, defence, wire and cable, construction, chemical plants, nuclear, medical, food and seals. These proceedings have brought together a collection of papers for material suppliers, engineers, compounders, manufacturers, processors and end-users of high performance elastomers who discussed the most appropriate materials and formulations for different applications.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859575109	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:

Rapra Technology

Compiled by:
Rapa Technology

High Performance and Speciality Elastomers 2007

Conference Proceedings

These conference proceedings cover a broad range of subjects including developments in fluoro and perfluoroelastomers, innovations in fluorinated liquid silicone rubber, processing and reprocessing of high performance and speciality elastomers and case studies demonstrating their uses in subsea and sealing applications.

PUBLICATION DATE: JANUARY 2008

FORMAT: PAPERBACK	ISBN: 9781847350213	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
iSmithers Rapra

High Performance Elastomers and Polymers for Oil and Gas 2010

Conference Proceedings

These proceedings cover all the presentations from the conference which was developed for operators, contractors, equipment and component suppliers, material suppliers and research organisations involved with polymers and their use in oil and gas applications. This fifth High Performance Elastomers conference marked the first conference with a special focus on oilfield applications.

PUBLICATION DATE: JANUARY 2010

FORMAT: PAPERBACK	ISBN: 9781847354938	GB: £100.00	US: \$165.00	EU: €125.00
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Compiled by:
Rapa Technology

High Performance Fillers 2005

Conference Proceedings

Increasingly, fillers are seen as high performance additives, not just cost lowering diluents, and this was the focus of the conference, which has papers from both users and producers of performance enhancing fillers. Prominent among the topics covered are important growth areas such as; nanofillers, fire retardant fillers and natural fibre based composites.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859575000	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

High Performance Fillers 2006

Conference Proceedings

This conference focused on developments in high performance fillers from established materials to the latest innovations. There were presentations on many different types of fillers from flash calcined clays, diatomaceous earths and perlites, aluminas, natural fibres, titanium oxides, mica, wollastonite, pigments and glass foam to nanographite, POSS and nanocomposites. Information on filler interactions with other compounding ingredients and surface modification with silanes was also presented.

PUBLICATION DATE: JANUARY 2006

FORMAT: PAPERBACK	ISBN: 9781859575604	GB: £100.00	US: \$180.00	EU: €160.00
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High Performance Fillers 2007

Conference Proceedings

Fillers are playing an increasingly important role in polymer applications, a trend that will increase with the rise in the cost of oil and hence polymer feedstocks. Increasingly though, fillers are seen as high performance additives, not just cost lowering diluents, and this is the focus of Rapra's third 2-day international conference on high performance fillers.

PUBLICATION DATE: JANUARY 2007

FORMAT: PAPERBACK	ISBN: 9781847350138	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

High Performance Fillers for Polymer Composites 2009

Conference Proceedings

These proceedings include presentations that discussed current and predicted filler markets, how fillers can lead to cost savings, new milling processes, the development of new filler types, the continued evolution of natural fibre fillers, use of fillers as flame retardant additives, the potential to improve the compatibility of mixed polymer waste, recent developments in nano-particulate fillers and new additives for use with silica fillers, especially in energy (green) tyre applications.

PUBLICATION DATE: JANUARY 2009

FORMAT: PAPERBACK	ISBN: 9781847353894	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357571	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

High Performance Plastics 2005

Conference Proceedings

High performance plastics are replacing traditional materials in hostile environments. They possess characteristics such as exceptional strength, light weight, temperature resistance, chemical resistance and dimensional stability. These plastics are easy to process and can be coloured (or transparent) and moulded to create innovative and attractive structures. This conference brought together experts discussing the latest developments in materials including properties, processing and applications.

Compiled by:

Rapra Technology

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859575055	GB: £100.00	US: \$180.00	EU: €160.00
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Latex 2006

Conference Proceedings

This fourth international conference on latex brought together manufacturers, technologists and researchers with a common interest in latex applications and technology. Latex materials are currently undergoing extensive research and development, and application areas are expanding. There is the perennial issue of allergy to proteins in natural rubber to consider and the ever-changing regulations on chemicals in the EU, which affect the compounding industry.

Compiled by:

Rapra Technology

PUBLICATION DATE: JANUARY 2006

FORMAT: PAPERBACK	ISBN: 9781859575505	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

Latex and Synthetic Polymer Dispersions 2008

Conference Proceedings

Drawing authorities from industry and academia, this conference offered the ideal platform to hear original technical papers and meet and exchange ideas with like-minded peers from across the world. This conference provided crucial updates on the latest trends and developments in natural latex, aqueous synthetic polymer latices, processing chemicals and additives. Topics addressed included new materials, machinery and equipment developments, application methods, standards & regulatory requirements, materials testing, quality control and market trends.

PUBLICATION DATE: JANUARY 2008				
FORMAT: PAPERBACK	ISBN: 9781847350664	GB: £100.00	US: \$201.00	EU: €128.00
FORMAT: EBOOK	ISBN: 9781847356737	GB: £100.00	US: \$180	EU: €160

Latex and Synthetic Polymer Dispersions 2010

Conference Proceedings

iSmithers' sixth international conference for the latex and emulsion industry was held in Amsterdam in March 2010. The conference provided an essential update on the latest trends and developments in natural latex, aqueous synthetic polymer latices, processing chemicals and additives, latex-based products and relevant legislation. This conference provided a forum to discuss the latest market, technology and materials news. Topics addressed included new materials, machinery and equipment developments, application methods, latex-based products, standards & regulatory requirements, materials testing, quality control and market trends.

PUBLICATION DATE: JANUARY 2010				
FORMAT: PAPERBACK	ISBN: 9781847357588	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847353993	GB: £100.00	US: \$165.00	EU: €125.00

Compiled by:
Rapra Technology

Compiled by:
Rapra Technology

Multilayer Films 2005

Conference Proceedings

Multilayer technology allows several materials to be combined to give a wide range of properties. This is particularly useful in packaging applications, where wrappings must not affect contents and at the same time protect from damage and exposure to contaminants.

New equipment is continually being developed to produce more and more layers in films. Sometimes an adhesive layer is required; material selection is a key issue. Testing and quality control are topics for debate. How do you make sure that all the layers in a multilayer film are intact, of the correct thickness and durable? Recycling is now a key legislative issue affecting many plastics industries, mixed materials can complicate this process. The Rapra conference on Multilayer Films included top experts on processing, materials, applications, testing and recycling. This first international conference on Multilayer Films brought together the plastic films industry: converters, manufacturers, machinery developers, test houses, materials suppliers, engineers and packaging end-users to hear about the latest technology and products.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859575406	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

Nanopolymers 2007

Conference Proceedings

Delegates who attended this conference heard new approaches in the synthesis, characterisation and commercial application of nanopolymers. The cost benefits of incorporating nano-scale ingredients into polymer-based products was featured, along with examples of how to disperse the nano-ingredients to maximise the properties required.

PUBLICATION DATE: JANUARY 2007

FORMAT: PAPERBACK	ISBN: 9781847350169	GB: £100.00	US: \$180.00	EU: €160.00
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Nanopolymers 2008

Conference Proceedings

Nanopolymers 2008 was designed to bring attendees up to date with the latest developments in this fast-evolving field. Nanopolymer technology continues to grow at an alarming rate. Nanotechnology is transforming the transport, energy, packaging, healthcare and construction sectors by offering improved properties from lighter weight materials, through flame retardant polymers, to functionalised surfaces which can enable anti-corrosive, anti-reflective, anti-microbial, anti-scratch composite surfaces or provide barrier properties.

PUBLICATION DATE: JANUARY 2008

FORMAT: PAPERBACK	ISBN: 9781847350749	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357601	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

Nucleating Agents

Rapra Review Report

This review provides information on the development of materials and methods for influencing the nucleation of polymer crystallization in commercial processing by means of addition of low levels (generally between about 0.01 and 1 wt%) of adjuvants specifically selected for this purpose. This report provides information on potential nucleating agents including organic acid derivatives, sorbitol derivatives, phosphorus-containing species, and inorganics.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781847350831	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847351531	GB: £85.00	US: \$153.00	EU: €136.00

Author:
Stuart Fairgrieve

Plastics Additives

Market Report

The additive families are considered with an outline of the technical issues and the trends driving the markets. The main marketplaces for each additive type are discussed and the trends outlined. It contains an overview of the significant trends in the four largest plastics market sectors: packaging, construction, automotive and electrical and electronics.

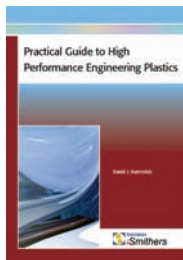
PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859574997	GB: £300.00	US: \$540.00	EU: €480.00
FORMAT: EBOOK	ISBN: 9781847350374	GB: £300.00	US: \$540.00	EU: €480.00

Author:
Geoffrey Pritchard

Authors:

K.S. Santhosh Kumar,
Chethrapilli P
Reghunadhan Nair



Author:

David J. Kemmish

Polybenzoxazines: Chemistry and Properties

Smithers Rapra Updates

This book provides information on the developments and properties of contemporary thermosetting polymers, along with the chemistry and curing kinetics of polybenzoxazines. The unique properties of polybenzoxazines originate from their hydrogen-bonded structures. This book also furnishes detailed information on the syntheses and properties of various polybenzoxazines prepared from different monomers. Additionally, this book also elaborates on the preparation and properties of the modified polybenzoxazines such as their blends and nanocomposites.

PUBLICATION DATE: JANUARY 2010

FORMAT: HARDBACK	ISBN: 9781847355003	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847355027	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847355010	GB: £120.00	US: \$200.00	EU: €150.00

Practical Guide to High Performance Engineering Plastics

Practical Guide

This book gives readers a working knowledge and understanding of high performance engineering plastics. It starts with a simple, practical overview of key properties and principles. In each of the chapters there are sections on production chemistry, product forms, properties, processing and applications. There is a strong bias towards materials and concepts which are used in practice. The materials covered include high performance Polyethersulfones, Polyetherimides, Polyphthalamides, Polyphenylene Sulfide, Polyaryletherketones, Polyamideimides, Polyimides, Polybenzimidazole, Liquid Crystalline Polyesters and Perfluoropolymers.

PUBLICATION DATE: JANUARY 2011

FORMAT: HARDBACK	ISBN: 9781847355768	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: PAPERBACK	ISBN: 9781847355775	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847355782	GB: £80.00	US: \$130.00	EU: €100.00

Practical Guide to Microbial Polyhydroxyalkanoates

Practical Guide

The book provides detailed information on the various microbial aspects that govern the design and synthesis of commercially useful PHA. Unlike chemical polymerisation processes, the microbial system involves multiple biological catalysts that convert renewable carbon sources into monomers and finally high molecular weight polymers in an aqueous environment and at ambient conditions. This book provides the reader with important information on the crystalline and solid-state structures of PHA as well as the physical and mechanical properties. This Practical Guide also gives information on the nature and mechanism of PHA biodegradation.

PUBLICATION DATE: JANUARY 2010

FORMAT: HARDBACK	ISBN: 9781847351180	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847351173	GB: £50.00	US: \$80.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847351197	GB: £75.00	US: \$125.00	EU: €95.00

Authors:

Kumar Sudesh,
Hideki Abe

Practical Guide to Polyethylene

Practical Guide

This practical guide begins with general background to the polyethylene family, with price, production and market share information. It describes the basic types of polyethylene including virgin and filled polyethylene, copolymers, block and graft polymers and composites, and reviews the types of additives used in polyethylene. It gives information on the properties, including, amongst others, rheological, mechanical, chemical, thermal, and electrical properties.

PUBLICATION DATE: JANUARY 2005

FORMAT: PAPERBACK	ISBN: 9781859574935	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: EBOOK	ISBN: 9781847350510	GB: £50.00	US: \$90.00	EU: €80.00

Authors:

Cornelia Vasile,
Mihaela Pascu

Authors:

Marc J. Abadie,
Alexander L. Rusanov,
Vanda Y. Voytekunas

Author:

Stuart Patrick

Authors:

Dzmitry Shcharbin,
Barbara Klajnert,
Maria Bryszewska

Practical Guide to Polyimides

Practical Guide

This report covers the synthesis of polyimides from chloral and trinitrotoluene and reviews the production of new types of polyimides combining good thermal, mechanical and electrical properties with improved processability. It is ideal for those who work with polyimides, either producing them or those using them to manufacture other goods. It will be of interest to those in both academia and industry.

PUBLICATION DATE: JANUARY 2007				
FORMAT: PAPERBACK	ISBN: 9781847350596	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: EBOOK	ISBN: 9781847350589	GB: £50.00	US: \$90.00	EU: €80.00

Practical Guide to Polyvinyl Chloride

Practical Guide

Rapra's Practical Guide to PVC is packed with information for everyone working with PVC. It provides comprehensive background on the resins and additives, their properties and processing characteristics, as well as discussion of product design and development issues.

PUBLICATION DATE: JANUARY 2005				
FORMAT: PAPERBACK	ISBN: 9781847350527	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: EBOOK	ISBN: 9781859575116	GB: £50.00	US: \$90.00	EU: €80.00

Practical Guide to Studying Dendrimers

Practical Guide

This book provides a compact, up-to-date description of methods useful in studying biological properties of dendrimers. It focuses on biological properties of dendrimers and creates a practical guide that reviews the methods used to study these aspects of dendrimers. There is a need to describe a set of methods applied to characterise different types of dendrimers. Such standardisation will hopefully help to compare different families of dendrimers in the future. This book presents a methodological approach and provides useful tips how to study dendrimers.

PUBLICATION DATE: JANUARY 2010				
FORMAT: HARDBACK	ISBN: 9781847354440	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847354457	GB: £50.00	US: \$80.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847354464	GB: £75.00	US: \$125.00	EU: €95.00

Rapra Collection of Infrared Spectra of Rubbers, Plastics and Thermoplastic Elastomers, Third Edition

Handbook

This library represents one of the most comprehensive, independent collections of infrared spectra that are commercially available. Drawing on Rapra's international reputation as a centre of excellence and compiled by polymer analysts for polymer analysts it has proved, since the first edition appeared in 1992, to be of immense value to users from both academia and industry. The many improvements in this edition, particularly the inclusion of an ATR section and the enlargement of the range of polymer blends that are covered, will ensure that this library continues to be a 'must have' acquisition for all those concerned with the analysis of polymers and polymer systems.

PUBLICATION DATE: JANUARY 2007				
FORMAT: SPIRAL BOUND	ISBN: 9781847350237	GB: £220.00	US: \$396.00	EU: €352.00
FORMAT: HARDBACK	ISBN: 9781847350244	GB: £220.00	US: \$396.00	EU: €352.00

Authors:

Martin Forrest, Yvonne Davies, Jason Davies

Rubber - A Story of Glory and Greed

Classic Rapra Reprint

History, war, bloodshed and even romance ... it's all contained in this Classic Rapra Reprint! The book is targeted at the general reader, it's both informative and entertaining. It will also be interesting to students of the history of science, as well as to those who work with rubber on a day-to-day basis and those who would like to know more about the background of the rubber that they are working with.

PUBLICATION DATE: JANUARY 2009				
FORMAT: PAPERBACK	ISBN: 9781847353757	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: EBOOK	ISBN: 9781847353764	GB: £50.00	US: \$90.00	EU: €80.00

Authors:

Howard Wolf,
Ralph Wolf

Edited by:

Jim White, Kinsuk
Naskar, Sadhan K. De

Compiled by:

Rapra Technology

Rubber Technologist's Handbook, Volume 2

Handbook

This book is a companion volume to Rubber Technologist's Handbook published in 2001. Written by experts in their respective fields, this handbook discusses the most recent developments in the subject. The ten chapters cover Microscopic Imaging of Rubber Compounds, Intelligent Tyres, Silica-Filled Rubber Compounds, Fibres In The Rubber Industry, Naval and Space Applications of Rubber, Advances in Fillers for the Rubber Industry, Thermoplastic Elastomers by Dynamic Vulcanisation, Polymers In Cable Applications, Durability of Rubber Compounds, and Radiochemical Ageing of Ethylene-Propylene-Diene Monomer.

PUBLICATION DATE: JANUARY 2009

FORMAT: HARDBACK	ISBN: 9781847351005	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847350992	GB: £135.00	US: \$243.00	EU: €216.00
FORMAT: EBOOK	ISBN: 9781847351012	GB: £75.00	US: \$125.00	EU: €95.00

RubberChem 2006

Conference Proceedings

This fifth international conference on rubber chemicals, mixing and compounding brought together leading researchers, manufacturers and technologists from across the world to discuss the latest research and development in rubber chemicals as well as new regulations, applications and market trends.

PUBLICATION DATE: JANUARY 2006

FORMAT: PAPERBACK	ISBN: 9781847350053	GB: £100.00	US: \$180.00	EU: €160.00
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RubberChem 2008

Conference Proceedings

The rubber industry continued to face the ongoing challenges of cost-down pressures from the automotive industry, low-price competition from suppliers in China and Eastern Europe and an array of environmental issues. In particular the REACH regulations governing European chemical imports forced producers of rubber processing chemicals to reformulate and develop less hazardous products whilst the ever increasing application demand for higher performance and superior durability of rubber articles is driving continuous technical development in the use of chemicals in rubber compounds.

Compiled by:
Rapra Technology

PUBLICATION DATE: JANUARY 2008

FORMAT: PAPERBACK	ISBN: 9781847350770	GB: £100.00	US: \$180.00	EU: €160.00
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Silicone Elastomers 2006

Conference Proceedings

This is a very comprehensive review of the state of the art in silicone elastomers. It deals with the advantages of using silicone rubbers, such as high temperature and chemical resistance, pigmentability and transparency, combined with good electrical properties.

Compiled by:
Rapra Technology

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781847350022	GB: £100.00	US: \$180.00	EU: €160.00
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Silicone Elastomers 2008

Conference Proceedings

Silicone Elastomers 2008 brought together major material manufacturers, such as Dow Corning, Wacker Chemie, Momentive Performance Materials and Bluestar Silicones, looking at market trends and new developments in materials such as LSR and liquid fluorosilicone rubber.

Compiled by:
Rapra Technology

PUBLICATION DATE: 2008

FORMAT: PAPERBACK	ISBN: 9781847350695	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357656	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
iSmithers Rapra

Silicone Elastomers 2009

Conference Proceedings

Silicone Elastomers 2009 was an international conference that informed the length and breadth of the silicone elastomers supply chain on current research developments and new applications. The application areas of silicone elastomers are widespread due to their wide spectrum of high performance qualities; temperature stability, electrical resistance, chemical inertia and high biocompatibility. Medical, healthcare, food, automotive, electrical, electronic and domestic appliance industries all require silicone elastomer blends that meet individual criteria.

PUBLICATION DATE: 2009				
FORMAT: PAPERBACK	ISBN: 9781847357663	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847353955	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
iSmithers Rapra

Smart Polymer Systems 2010

Conference Proceedings

The conference highlighted the most recent advances and developments in this rapidly evolving field and provided attendees with a broad and comprehensive outlook on the emerging trends, perspectives, and limitations of the technological applications of various classes of stimuli-responsive polymer materials. These proceedings cover presentations from an impressive panel of speakers from industry and academia, who showcased the scope of these "smart" materials, their potential applications and how you might capitalise on this emerging technology.

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847354945	GB: £100.00	US: \$180.00	EU: €160.00

Thermochromic Phenomena in Polymers

Smithers Rapra Updates

Thermochromic Phenomena in Polymers focuses on the thermochromic phenomena in polymers. The content of the present review is structured according to the thermochromic material type. Chapter 1 provides an overview about polymers exhibiting thermochromic properties themselves. Thermochromic polymer systems obtained by doping the polymer matrix with thermochromic additives are reported in Chapter 2 and Chapter 3 reviews polymer systems in which the interaction between the polymer matrix and an incorporated additive is the origin of thermochromism. Finally, in the fourth chapter polymer systems changing their transparency with temperature by switching reversible between a transparent and a light scattering state are reviewed.

Authors:

Detlef Lotzsch,
Arno Seeboth

PUBLICATION DATE: 2008

FORMAT: HARDBACK	ISBN: 9781847351128	GB: £75.00	US: \$135.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847351135	GB: £75.00	US: \$135.00	EU: €120.00

Thermoset Nanocomposites for Engineering Applications

Handbook

This book helps to answer questions related to the design of nanocomposites by controlling the processing technology and structure. The book is addressed not only to researchers and engineers who actively work in the broad field of nanocomposite technology, but also to newcomers and students who have just started investigations in this multidisciplinary field of material science.

PUBLICATION DATE: 2007

FORMAT: HARDBACK	ISBN: 9781847350626	GB: £120.00	US: \$216.00	EU: €192.00
FORMAT: PAPERBACK	ISBN: 9781847350633	GB: £95.00	US: \$171.00	EU: €152.00
FORMAT: EBOOK	ISBN: 9781847350640	GB: £120.00	US: \$216.00	EU: €192.00

Author:

Rumiana Kotsilkova

Compiled by:
Rpra Technology

TPE 2005

Conference Proceedings

TPEs continue to show healthy growth compared with most other polymeric materials, due to their unique combination of elastomeric properties with thermoplastic processibility. This 8th international conference on thermoplastic elastomers featured 25 papers from top experts on TPE materials, processing and applications.

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781859575253	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rpra Technology

TPE 2006

Conference Proceedings

Now in its ninth year, this international conference is firmly established as Europe's premier event for the thermoplastic elastomers industry. These proceedings focus on the latest TPE materials, performance, processing and applications.

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781847350046	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rpra Technology

TPE 2007

Conference Proceedings

This international conference is firmly established as Europe's premier event for the thermoplastic elastomers industry. There are significant commercial opportunities for exploiting their unique properties in automotive, appliance, personal care, medical and sporting applications. This conference looked at what is currently happening with thermoplastic elastomers. Including the latest developments in SBC, TPO, TPV, COPE, COPA, and TPU materials, together with additives, processing, applications, commercial and design aspects for TPEs.

PUBLICATION DATE: 2007

FORMAT: PAPERBACK	ISBN: 9781847350206	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

TPE 2008

Conference Proceedings

Building on the success of last year's TPE 2007, Smithers Rapra's eleventh conference, held in Prague, November 2008, highlighted new and exciting developments in markets, materials, additives and applications. The two-day conference was packed with innovative, application-driven papers detailing the advances in, amongst other things: Barrier properties of styrene block copolymers and TPUs to meet the requirements of the medical and food industries
New block copolymer TPEs based on polybutadiene; The viscoelastic properties of SEBS in both the solid and molten states; Modern peroxide cure systems for TPVs
TPU and copolyamide TPEs based on renewable resources; and Carbon nanotubes and other nanofillers to improve the flame retardancy of TPEs.

PUBLICATION DATE: 2009

FORMAT: PAPERBACK	ISBN: 9781847350763	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
iSmithers Rapra

TPE 2009

Conference Proceedings

With the end applications of TPEs so varied; dashboards, medical tubing, shoe soles, this conference gave a broad overview into the various subgroups of TPEs (TPO, TPU, TPV), additives, fillers, nano fillers and processing technologies making it the most comprehensive insight into this evolving industry. These conference proceedings include presentations from: Dow Automotive, JSP, Kuraray, Arkema, Dow Chemical Company, Mitsui, Rubber Research Institute of India, Lubrizol, Renkert Oil and many more.

PUBLICATION DATE: 2010

FORMAT: PAPERBACK	ISBN: 9781847353979	GB: £100.00	US: \$165.00	EU: €125.00
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Compiled by:
iSmithers Rapra

Author:
Robin Britton

TPE 2010

Conference Proceedings

These proceedings cover all the presentations from the conference which include a review of styrenic TPE with improved compression set for sealing applications, a new TPE with high vibration damping characteristics and high performance TPE compounds suitable for medical/pharmaceutical use. New processing techniques for compounding TPVs together with new TPVs for automotive applications and the UV performance of TPVs were also amongst the topics for discussion.

PUBLICATION DATE: 2010

FORMAT: PAPERBACK	ISBN: 9781847354969	GB: £100.00	US: \$165.00	EU: €125.00
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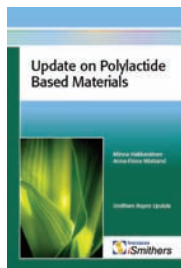
Update on Mouldable Particle Foam Technology

Smithers Rapra Updates

This update summarises the present status of particle foam technology and how specific challenges have already driven its development. This includes the potential threats to the fire retardants and blowing agents which have been used for many years. This update is written by a plastics technologist who recently joined the EPS industry. It will be of interest to both relative newcomers and those who already have long experience but wish to know more technical detail about a fascinating branch of plastics technology.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847354068	GB: £75.00	US: \$135.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847354075	GB: £75.00	US: \$135.00	EU: €120.00



Authors:

Minna Hakkarainen,
Anna-Finne Wistrand

Authors:

Bibin John,
Chethrapilli P
Reghunadhan Nair

Update on Poly lactide Based Materials

Smithers Rapra Updates

Poly lactides are aliphatic polyesters derived from lactic acid, and various derivatives thereof, and are one of the most promising of polymers based on starting materials available from renewable resources. Materials based on these polymers are at the cutting edge of progress in sustainable materials science.

This book provides an overview of the latest developments in a number of aspects of poly lactide research. Chapters cover synthesis using novel catalysts and modified monomers, new copolymers, blends of poly lactides with other polymers, stereocomplexes and nanocomposites. The information contained therein will be of interest to all involved in the development of poly lactides and other polymers based on sustainable resources, with discussions on how to modify and improve these materials to expand their capabilities even further.

PUBLICATION DATE: 2011

FORMAT: HARDBACK	ISBN: 9781847355829	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847355843	GB: £80.00	US: \$130.00	EU: €100.00

Update on Syntactic Foams

Smithers Rapra Updates

This Update gives the reader a good insight into the properties, manufacture and uses of syntactic foams. It covers the basics of syntactic foams including the types of microballoons used, foam structure, methods of synthesis and the properties. It also covers syntactic foams based on different types of resin systems such as epoxy, phenolics, cyanate ester and so on. This Update also has information recent developments in the field such as fibre reinforcement, nanoclay reinforcement, functionally grading of foams, rubberisation, syntactic foam core sandwich composites and cement-based syntactic foams, as well as on the applications of syntactic foams.

PUBLICATION DATE: 2010

FORMAT: HARDBACK	ISBN: 9781847351203	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: EBOOK	ISBN: 9781847351210	GB: £75.00	US: \$125.00	EU: €95.00

Update on the Technology and Applications of Polyaryletherketones

Smithers Rapra Updates

This review provides an overview of all the key aspects of PAEK technology including their production, characterisation, product forms (including compound, blends, composites, films, coatings and medical grades) and classes of application in each industry sector. It includes the many of the key historical developments and discusses up to date information on manufacturers, product forms and applications.

Author:
David Kemmish

PUBLICATION DATE: 2010

FORMAT: HARDBACK	ISBN: 9781847354082	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: EBOOK	ISBN: 9781847354099	GB: £75.00	US: \$125.00	EU: €95.00

Assessing Food Safety of Polymer Packaging

Handbook

The packaging material has to both preserve the food and to protect it from deterioration, outside contamination or damage during distribution and storage; and the packaging material in direct contact with a food must not itself harm, or be harmed by, the food. This book is designed to help current and prospective researchers in this field, understand the theory of food safety in plastic packaging. It will be of interest to anyone who uses polymeric food packaging.

Authors:

Jean-Maurice
Vergnaud, Iosif-Daniel
Rosca

PUBLICATION DATE: 2006				
FORMAT: PAPERBACK	ISBN: 9781859575277	GB: £90.00	US: \$162.00	EU: €144.00
FORMAT: EBOOK	ISBN: 9781847350268	GB: £90.00	US: \$162.00	EU: €144.00

Blowing Agents and Foaming Processes 2009

Conference Proceedings

The eleventh conference of Blowing Agents and Foaming Processes is well established and the only event world-wide offering such a prestigious range of academic, practical and industrial papers. With sessions focusing on blowing agents and gases specialities, nano structures, foam injection moulding, new extrusion findings and microcellular foams.

Author:
Rapra Technology

PUBLICATION DATE: 2009				
FORMAT: PAPERBACK	ISBN: 9781847353924	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357502	GB: £100.00	US: \$180.00	EU: €160.00

Coatings and Inks for Food Contact Materials

Rapra Review Report

This report covers all of the coatings and inks products used in food contact scenarios. In practice, this encompasses an extremely wide range of polymer systems and formulations, and an emphasis has been placed on coatings and inks used in food packaging, as this is usually regarded as representing the most important application category with respect to the potential for migration to occur.

PUBLICATION DATE: 2007

FORMAT: PAPERBACK	ISBN: 9781847350794	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847351357	GB: £85.00	US: \$153.00	EU: €136.00

Author:
Martin Forrest

Food Contact Materials - Rubbers, Silicones, Coatings and Inks

Handbook

This book is an amalgamation of data from four recent projects. This report provides a wealth of information taken from the results and findings of research projects on: Migration Data of Food Contact Rubbers (Two projects), Rubber Breakdown Products, Chemical Migration from Silicones used in Connection with Food Contact Materials and Articles and An Assessment of the Potential of Migration of Substances from Inks and their Respective Coatings.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847351418	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: PAPERBACK	ISBN: 9781847354198	GB: £80.00	US: \$144.00	EU: €128.00
FORMAT: EBOOK	ISBN: 9781847354150	GB: £100.00	US: \$180.00	EU: €160.00

Author:
Martin Forrest

Food Contact Polymers 2009

Conference Proceedings

Smithers Rapra's second Food Contact Polymers conference was a forum to discuss the latest research and developments in food contact grades of materials in compliance with harmonised European legislation, national standards and market demands. This conference brought together the partners from the food processing and packaging supply chain to learn about new materials and innovations in food manufacturing processes and packaging, materials selection, testing and the all important legislation applicable to all types of food contact materials.

PUBLICATION DATE: 2009

FORMAT: PAPERBACK	ISBN: 9781847353900	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357564	GB: £100.00	US: \$180.00	EU: €160.00

Author:
Rapra Technology

Food Contact Rubbers 2 - Products, Migration and Regulation

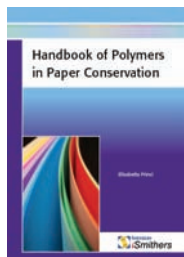
Rapra Review Report

The objective of this report is to provide a comprehensive overview of the use of rubber as a food contact material, from an initial description of the types of rubber which are used in the industry, through the formulation of products, and the contact regulations and migration testing regimes, to the research that is on-going to improve its safety and the trends for the future.

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859575222	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350332	GB: £85.00	US: \$153.00	EU: €136.00

Author:
Martin Forrest



Author:
Elisabetta Princi

Handbook of Polymers in Paper Conservation

Handbook

This practical book identifies the importance of each type of polymer, related to its nature and properties, from the point of view of paper conservation. With the help of schemes and tables, the polymers are classified in terms of characteristics and final uses in respect to this very complex material.

PUBLICATION DATE: 2011

FORMAT: HARDBACK	ISBN: 9781847355799	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847355805	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355812	GB: £120.00	US: \$200.00	EU: €150.00

Healthcare Sterilisation: Back to the Future and Scientific Wizardry

Handbook

The magic of sterilisation is more than just the inactivation of all biological organisms. It is a process without the destruction or damage of items, materials or polymers being processed unless for destruction of infectious entities, materials or wastes. It is an interdisciplinary integration of biology, chemistry, engineering, manufacturing, materials, medical, physics, quality, regulatory, and statistics.

PUBLICATION DATE: 2012

FORMAT: HARDBACK	ISBN: 9781847354525	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847354532	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847354549	GB: £120.00	US: \$200.00	EU: €150.00

Author:
Wayne R. Rogers

Products & Applications

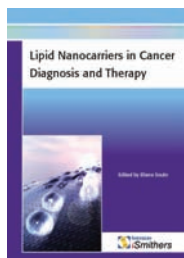
Leachables and Extractables 2008

Conference Proceedings

Material selection for pharmaceutical packaging must include thorough screening for leachables and extractables in order to ensure compatibility in drug- package combinations. The conference brought together the pharmaceutical supply chain to discuss the latest research and development in minimising the risk posed by leachables and extractables. This conference covered Parenterals, implantables, inhalers, solid dose packaging, and more.

PUBLICATION DATE: 2008				
FORMAT: PAPERBACK	ISBN: 9781847350688	GB: £100.00	US: \$180.00	EU: €160.00

Author:
Rapra Technology



Lipid Nanocarriers in Cancer Diagnosis and Therapy

Handbook

Lipid Nanocarriers in Cancer Diagnosis and Therapy fills a need for an accurate, coherent and authoritative introduction to lipid nanocarriers focusing in cancer therapy; both because of the growing popularity of these modern drug delivery systems and also because of the emergent need of dealing with cancer treatment. This handbook deals with lipid nanocarriers for targeted delivery to tumours of various organs and combination of these with other methods of treatment of cancer such as radiotherapy, diagnostic and imaging analysis. Lipid nanocarriers are also used for gene therapy for cancer.

PUBLICATION DATE: 2011				
FORMAT: HARDBACK	ISBN: 9781847354778	GB: £130.00	US: \$215.00	EU: €165.00
FORMAT: PAPERBACK	ISBN: 9781847354785	GB: £90.00	US: \$150.00	EU: €115.00
FORMAT: EBOOK	ISBN: 9781847354792	GB: £130.00	US: \$215.00	EU: €165.00

Author:
Eliana Souto

Products & Applications

Medical Polymers 2006

Conference Proceedings

The use of polymers in medical technology continues to grow and provides high value business opportunities. Applications vary from high-tech miniature components to bone cement, degradable implants and bulk quantity items such as catheters and drip bags. Medical technology is advancing rapidly and materials need to be developed to meet the demands. This 5th international conference on medical polymers brought together speakers and delegates from the whole medical device supply chain to discuss the issues for the industry today.

Author:

Rapra Technology

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781859575802	GB: £100.00	US: \$180.00	EU: €160.00
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Oilfield Engineering with Polymers 2006

Conference Proceedings

This fifth international MERL conference, organised jointly with Rapra Technology, provided a unique forum to discuss the latest developments in the selection, qualification and performance of polymeric materials. It brought together operators, contractors, equipment and component suppliers, materials suppliers and research organisations involved with polymers and their use in oil & gas sector applications.

Author:

Rapra Technology

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781859575659	GB: £100.00	US: \$180.00	EU: €160.00
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Pharmaceutical Polymers 2007

Conference Proceedings

Rapra Technology held this international conference on Pharmaceutical Polymers on 20-21 June 2007 in Basel, which brought together world experts to discuss the latest techniques for the process optimisation of pharmaceutical polymers.

Author:

Rapra Technology

PUBLICATION DATE: 2007

FORMAT: PAPERBACK	ISBN: 9781847350176	GB: £100.00	US: \$180.00	EU: €160.00
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Products & Applications

Polymer Electronics - A Flexible Technology

Handbook

Polymer Electronics - A Flexible Technology, is designed to inform researchers, material suppliers, component fabricators and electronics manufacturers of research and developments in this dynamic and rapidly evolving field.

The rapid development of polymer electronics has revealed the possibility for transforming the electronics market by offering lighter, flexible and more cost effective alternatives to conventional materials and products. This book is written by a number of authors all of whom work for companies at the cutting edge of these new technologies.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847354211	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: PAPERBACK	ISBN: 9781847354228	GB: £80.00	US: \$144.00	EU: €128.00
FORMAT: EBOOK	ISBN: 9781847354235	GB: £100.00	US: \$180.00	EU: €160.00

Author:

Rapra Technology

Polymers in Aerospace Applications

Rapra Review Report

This review report gives an overview of how polymers are used in aerospace applications. Topics covered include: Composites, including thermosets, thermoplastics and nanocomposites. Fibre reinforcement of the composites and the specialised applications are covered. For each type of composite, the chemistry, cure methods, fabrication methods, mechanical properties, thermal properties and environmental degradation are considered.

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847350930	GB: £85.00	US: \$140.00	EU: €105.00
FORMAT: EBOOK	ISBN: 9781847354693	GB: £85.00	US: \$140.00	EU: €105.00

Author:

Joel Fried

Products & Applications

Polymers in Automotive Fuel Containment 2005

Conference Proceedings

Automotive fuel containment is a critical factor in vehicle safety. Changes in fuel formulation and regulations on emissions, together with the development of new types of fuel have brought challenges to automotive engineers and the industry supply chain. This event brought together experts to discuss the latest developments in fuel system component manufacturers; polymer R&D specialists and material suppliers.

Author:

Rapra Technology

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859575451	GB: £100.00	US: \$180.00	EU: €160.00
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Polymers in Cementitious Materials

Handbook

The construction of increasingly tall, more intricate and ornate structures require cementitious materials to be stronger and more flexible and this can be achieved by the inclusion of chemical additives. These can include fillers to give improved strength, accelerators to decrease reaction time and polymer-based materials to make the final material less brittle. This book seeks to explore the use of polymers as additives to cementitious materials.

Author:

Michelle Miller

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859574911	GB: £95.00	US: \$171.00	EU: €152.00
FORMAT: EBOOK	ISBN: 9781847350275	GB: £95.00	US: \$171.00	EU: €152.00

Polymers in Construction

Handbook

This book is a good basic guide to the polymers that are used in the construction industry. The types of polymers that can be used are discussed and specific applications are also covered. There is also a very comprehensive section on the health and safety aspects of using polymers in buildings.

Author:

Güneri Akovali

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859574683	GB: £95.00	US: \$171.00	EU: €152.00
FORMAT: EBOOK	ISBN: 9781847351777	GB: £95.00	US: \$171.00	EU: €152.00

Products & Applications

Polymers in Defence and Aerospace Applications 2007

Conference Proceedings

Polymers play a vital role in many defence and aerospace applications and there is huge amount of activity underway globally to produce new polymers and polymeric materials that can enhance these applications. Composites are one such example where materials have revolutionised performance capabilities. Much of the conference was devoted to composites, nanocomposites and their novel applications, and also many other key novel polymers, processes and applications, including high temperature thermoplastics, elastomers and rubbers.

Author:
Rapra Technology

PUBLICATION DATE: 2007				
FORMAT: PAPERBACK	ISBN: 9781847350190	GB: £100.00	US: \$180.00	EU: €160.00

Polymers in Defence and Aerospace Applications 2010

Conference Proceedings

This conference covered all of the important polymer related areas specific to the defence and aerospace industries, from state-of-the-art R&D to characterisation, fabrication, technology development and many new and emerging applications.

Polymers in Defence & Aerospace Applications featured presentations from key defence and aerospace industry experts, as well as from polymer manufacturers and those developing new polymer based materials, technologies and applications.

Author:
iSmithers Rapra

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847353986	GB: £100.00	US: \$165.00	EU: €125.00

Products & Applications

Polymers in Electronics

Market Report

The pattern of polymer usage has changed and material formulations have had to be modified to conform with new European Union (EU) legislation relating to the use of hazardous materials in components. Furthermore there is now far more emphasis on recycling rather than landfill disposal and these are issues covered in the report.

This report will be of interest to all those involved in using polymers to produce electronic components and to those who provide the raw materials for the production.

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781847350060	GB: £300.00	US: \$540.00	EU: €480.00
FORMAT: EBOOK	ISBN: 9781847350404	GB: £300.00	US: \$540.00	EU: €480.00

Author:

Keith Cousins

Polymers in Electronics 2007

Conference Proceedings

This conference saw presentations from all parts of the electronics industry's materials supply chain, from raw materials to finished products and offered an opportunity to learn more about both traditional and new polymer materials, their markets, manufacturing processes and applications. It also covered the impact of legislation, the need to recycle and other polymer related challenges and opportunities for the industry.

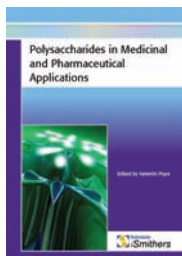
PUBLICATION DATE: 2007

FORMAT: PAPERBACK	ISBN: 9781847350091	GB: £100.00	US: \$180.00	EU: €160.00
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Author:

Rapra Technology

Products & Applications



Author:
Valentin Popa

Authors:
Vanessa Goodship,
Daniel Jacobs

Polysaccharides in Medicinal and Pharmaceutical Applications

Handbook

Polysaccharides in Medicinal and Pharmaceutical Applications presents new and specific aspects in the field of polysaccharides and their derivatives recommended for use in medicine and pharmacy. At the same time the aspects developed in this book will be useful to designing new systems for drugs delivery, immunomodulation, and new materials based on polysaccharides isolated from different sources and their derivatives.

PUBLICATION DATE: 2011

FORMAT: HARDBACK	ISBN: 9781847354365	GB: £160.00	US: \$265.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847354372	GB: £135.00	US: \$220.00	EU: €170.00
FORMAT: EBOOK	ISBN: 9781847354389	GB: £160.00	US: \$265.00	EU: €200.00

Polyvinyl Alcohol - Materials, Processing and Application

Rapra Review Report

For a number of years, plastic wastes have been accumulating at such a rate that there are now huge environmental concerns with their disposal. Options such as landfill and incineration have not been well received by the public, or indeed government legislation, and focus is now firmly upon the use of biodegradable alternatives for mass applications. One material that has been considered for mass application has been polyvinyl alcohol (PVOH). This Rapra Review Report provides a concise introduction to PVOH - the material itself, the processing and applications, and also potential future directions for PVOH.

PUBLICATION DATE: 2009

FORMAT: PAPERBACK	ISBN: 9781847350954	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350961	GB: £85.00	US: \$153.00	EU: €136.00

Silicone Products for Food Contact Applications

Rapra Review Report

This review report provides an extensive overview of the principal types of silicone products that are used in food contact situations, from a description of their manufacture and chemical composition, to a detailed review of the potential migrants and their migration behaviour. It also covers the relevant national and EU food contact legislation and describes recent, food related, technological developments.

Author:
Martin Forrest

PUBLICATION DATE: 2008

FORMAT: PAPERBACK	ISBN: 9781847350978	GB: £85.00	US: \$153.00	EU: €136.00
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Sterilisation of Polymer Healthcare Products

Handbook

Sterilisation has always been challenging but sterilisation of healthcare products and polymers, especially together is an even greater challenge – how do you sterilise without adversely affecting the end use or the end user? This book discusses all the sterilisation methods used for polymeric healthcare products both traditional and new.

With the many possible ways to sterilise healthcare products, and new techniques being developed all the time, the author identifies the variety of factors and functions that must be taken into account, such as the requirement for an understanding of physical, chemical and biological properties, design and manufacturing processes, quality control and regulatory issues.

This book is a necessary and worthwhile reference for medical device manufacturers and polymer suppliers, as well as purchasing and quality assurance managers in the healthcare industry.

Author:
Wayne R. Rogers

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859574904	GB: £95.00	US: \$171.00	EU: €152.00
FORMAT: EBOOK	ISBN: 9781847350398	GB: £95.00	US: \$171.00	EU: €152.00

Stimuli Responsive Drug Delivery Systems: From Introduction to Application

Handbook

Stimuli Responsive Drug Delivery Systems offers a convincing approach to understanding the basic principles of drug delivery process, their mathematical modeling, different types of drug delivery systems, various polymer systems responsive to stimuli such as swelling, pH, temperature, electric and magnetic fields, chemical agents, and more. The material covered in this book provides a wide spectrum of information - academic, research, and professional - for the biomedical, pharmaceutical and polymer chemistry communities.

PUBLICATION DATE: 2010

FORMAT: HARDBACK	ISBN: 9781847354167	GB: £150.00	US: \$250.00	EU: €190.00
FORMAT: PAPERBACK	ISBN: 9781847354174	GB: £110.00	US: \$180.00	EU: €140.00
FORMAT: EBOOK	ISBN: 9781847354181	GB: £150.00	US: \$250.00	EU: €190.00

Tank Linings for Chemical Process Industries

Handbook

Rubber linings can be used as passive protection against the corrosion of plant and equipment in the chemical process industries. Rubbers act as sacrificial materials reacting or un-reacting with the corrosive media, diffusing the liquids or not diffusing, swelling by itself or not swelling, permeating or not permeating gases or fumes, abrading or wearing by the slurry particles, getting ozonised or oxidised; but still protecting the metal surface beneath it, during its considerable life cycle under those severe and stressed conditions. Rubbers age but their life cycle is good enough to protect the metals against corrosion and erosion. This book describes exactly how to use rubber as a lining in tanks and how to overcome problems associated with this technique.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847351067	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847351050	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847351074	GB: £125.00	US: \$225.00	EU: €200.00

Authors:

Anil Bajpai, Sandeep
Shukla, Rajesh Saini

Author:

Chellappa
Chandrasekaran

Products & Applications

Update on Engineering and Structural Adhesives

Smithers Rapra Updates

This Update describes the most important adhesives for engineering applications in use today, including: Anaerobics, Epoxies, Reactive acrylics, Ultraviolet light cured (UV) adhesives, Polyurethanes, Reactive hot melt polyurethanes, Special formulations of cyanoacrylates, and more.

It covers the basic chemistry, applications, advances in technology, and durability testing of these adhesives. Important breakthrough technologies are highlighted such as the use of organoboranes as initiators for the bonding of low surface energy plastics and the use of nano technology to improve properties.

PUBLICATION DATE: 2010

FORMAT: HARDBACK	ISBN: 9781847354808	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: EBOOK	ISBN: 9781847354815	GB: £75.00	US: \$125.00	EU: €95.00

Author:
David Dunn

Update on Medical Plasticised PVC

Smithers Rapra Updates

This report is to review the plasticised poly(vinyl chloride) but particularly on medical application. The focus will be on the current development on environmental friendly plasticised PVC regarding the retardation of plasticiser leaching and the influence of plasticiser on biocompatibility. The current approaches on modification of plasticised PVC for improved blood compatibility and reduction of plasticiser migration are critically reviewed based on the authors' many years research works.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847352088	GB: £75.00	US: \$135.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847352095	GB: £75.00	US: \$135.00	EU: €120.00

Authors:
Xiaobin Zhao, James
M Courtney

Products & Applications



Author:
Luigi Pasqua

Author:
Natamai
Subramanian
Muralisrinivasan

Update on Silica-based Mesoporous Materials for Biomedical Applications

Smithers Rapra Updates

This book provides an insightful understanding of the mesoporous silica structure and its special properties. The details of synthesis and modification strategies are discussed by reviewing the open literature. The discussion concerning the potential of mesoporous silica in modern biomedical applications will be related to a critical analysis in the field of material science.

PUBLICATION DATE: 2011				
FORMAT: HARDBACK	ISBN: 9781847355072	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847355096	GB: £80.00	US: \$130.00	EU: €100.00

Update on Troubleshooting in Thermoforming

Smithers Rapra Updates

Thermoforming is one of the most common methods of processing plastics. It is extensively used by the packaging industry to produce disposable containers from blister packs for pharmaceuticals and electronics to microwavable food trays.

This book provides an insight into the problems occurring during production and offers detailed remedies in terms of the sheet to be thermoformed and its basic compound. It examines the different types of surface defects, how to identify them and ways to resolve them. This book will prove constructive reading to all those involved in the processing of plastics and wanting to remedy their thermoforming problems.

PUBLICATION DATE: 2010				
FORMAT: HARDBACK	ISBN: 9781847351371	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: EBOOK	ISBN: 9781847354709	GB: £75.00	US: \$125.00	EU: €95.00

Properties, Analysis & Testing

Author:
Roger Brown

50 Years of Polymer Testing

Handbook

The authoritative account reflects the author's position heading the testing laboratories at RAPRA and his involvement in international standardisation for many years. Much of the sbook is based on the editorials that have appeared over the thirty years that the author has been the editor of Polymer Testing Journal. They cover observations on the evolving changes in the conditions and attitudes in laboratories, the interaction of commercial and social pressures and the revolutions in instrument and information technology that have impacted on testing.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847354495	GB: £45.00	US: \$75.00	EU: €55.00
FORMAT: PAPERBACK	ISBN: 9781847354501	GB: £25.00	US: \$40.00	EU: €30.00
FORMAT: EBOOK	ISBN: 9781847354518	GB: £45.00	US: \$75.00	EU: €55.00

Characterisation of Polymers, Two Volume Set

Handbook

This two-volume set is intended to be a complete compendium of the types of methodology that have evolved for the determination of the chemical composition of polymers. Volume 1 covers the methodology used for the determination of metals, non-metals and organic functional groups in polymers, and for the determination of the ratio in which different monomer units occur in copolymers. The structure and microstructure of polymers, copolymers and rubbers are dealt with in Volume 2. More detailed aspects, such as sequencing of monomer units in copolymers, end-group analysis, tacticity and stereochemical determinations, are also dealt with in this subsequent volume.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847351289	GB: £200.00	US: \$360.00	EU: €320.00
FORMAT: PAPERBACK	ISBN: 9781847351326	GB: £150.00	US: \$270.00	EU: €240.00
FORMAT: EBOOK	ISBN: 9781847351272	GB: £200.00	US: \$360.00	EU: €320.00

Author:
T. R. Crompton

Properties, Analysis & Testing

Characterisation of Polymers, Volume 1 Handbook

This book is intended to be a complete compendium of the types of methodology that have evolved for the determination of the chemical composition of polymers. Volume 1 covers the methodology used for the determination of metals, non-metals and organic functional groups in polymers, and for the determination of the ratio in which different monomer units occur in copolymers. This book gives an up-to-date and thorough exposition of the state-of-the-art theories and availability of instrumentation needed to effect chemical and physical analysis of polymers.

PUBLICATION DATE: 2008

FORMAT: HARDBACK	ISBN: 9781847351227	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847351234	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847351241	GB: £125.00	US: \$225.00	EU: €200.00

Author:
T. R. Crompton

Characterisation of Polymers, Volume 2 Handbook

Characterisation of Polymers, Volume 2 gives an up-to-date and thorough exposition of the state-of-the-art theories and availability of instrumentation needed to effect chemical and physical analysis of polymers. This is supported by approximately 1200 references. The book should be of great interest to all those engaged in the subject in industry, university research.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847351258	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847351265	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847351272	GB: £125.00	US: \$225.00	EU: €200.00

Author:
T. R. Crompton

Properties, Analysis & Testing

Chromatography Mass Spectroscopy in Polymer Analysis

Handbook

The first part of this book discuss the various chromatographic and mass spectroscopic techniques now available. The next part covers the complementary methods, based on the combination of mass spectroscopy with various chromatographic techniques such as high-performance liquid chromatography, gas chromatography and supercritical fluid chromatography, Pyrolysis chromatography-mass spectroscopy and, finally mass spectroscopy to identify the pyrolysis products with the possibility of deducing finer details of polymer structure than were previously attainable by classical methods are discussed.

PUBLICATION DATE: 2010				
FORMAT: HARDBACK	ISBN: 9781847354822	GB: £130.00	US: \$215.00	EU: €165.00
FORMAT: PAPERBACK	ISBN: 9781847354839	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847354846	GB: £130.00	US: \$215.00	EU: €165.00

Author:
T. R. Crompton

Introduction to Polymer Analysis

Handbook

Introduction to Polymer Analysis gives an up-to-date and thorough exposition of the present state of the art of polymer analysis and, as such, should be of great interest to all those engaged in this subject in industry, university research establishment and general education. It is also intended for undergraduate and graduate chemistry students and those taking courses in plastics technology, engineering chemistry, materials science and industrial chemistry. It will be a useful reference work for manufacturers and users of plastics across all industries.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847353849	GB: £130.00	US: \$230.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847353856	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847353863	GB: £130.00	US: \$230.00	EU: €200.00

Author:
T. R. Crompton

Ozonation of Organic and Polymer Compounds

Handbook

The study of the kinetics and mechanism of ozone reactions is an important field in modern science closely related to the solution of the problem of 'ozone holes'. This authoritative handbook covers: Ozonation of alkanes and polyolefins; Ozonation of oxygen-containing organics; Ozonation of alkenes and polydienes in liquid phase; Ozonation of rubbers; Ozonation - quantum chemical approach and more.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847351425	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847351432	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847351449	GB: £125.00	US: \$225.00	EU: €200.00

Author:

Gennady Zaikov
Slavcho Rakovsky

Polymer Reference Book

Handbook

The aim of this book is to familiarise the reader with all aspects of the techniques used in the examination of polymers, covering chemical, physiochemical and purely physical methods of examination. The types of techniques available to the polymer chemist and technician are described, and their capabilities, limitations and applications are discussed.

PUBLICATION DATE: 2006

FORMAT: HARDBACK	ISBN: 9781859574928	GB: £165.00	US: \$297.00	EU: €264.00
FORMAT: PAPERBACK	ISBN: 9781859575093	GB: £110.00	US: \$198.00	EU: €176.00
FORMAT: EBOOK	ISBN: 9781847350251	GB: £165.00	US: \$297.00	EU: €264.00

Author:

T. R. Crompton

Properties, Analysis & Testing

Practical Guide to Smoke and Combustion Products from Burning Polymers - Generation, Assessment and Control

Practical Guide

Practical Guide to Smoke and Combustion presents one of the most complete overviews of this important topic, covering smoke generation (including obscuration, toxicity, corrosivity), small and large scale smoke assessment, regulation of smoke, and methods of controlling smoke by plastics formulation. In particular this book focuses on the assessment of fire hazard and fire risks from combustion products and is an important book for plastics processors, regulatory personnel, and fire research and safety engineers.

Author:

Sergei Levchik
Marcelo Hirschler
Edward Weil

PUBLICATION DATE: 2011

FORMAT: HARDBACK	ISBN: 9781847354426	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: PAPERBACK	ISBN: 9781847354433	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847355164	GB: £80.00	US: \$130.00	EU: €100.00

Strain Rate Testing of Metallic Materials and their Modelling for use in CAE based Automotive Crash Simulation Tools (Recommendations & Procedures)

Handbook

The aim of this book is to provide guidelines to generate tensile strain rate test data for ferrous and non-ferrous sheet metals for use in finite element based automotive crash simulation tools. Specifically, measurement of the strength hardening in a sheet material resulting from strain rate testing using a high speed servo hydraulic test machine. Additionally, to provide guidelines to process raw test data, fit material model and format this data for application in crash simulation tools.

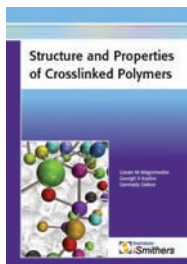
Author:

Paul K. C. Wood
C. A. Schley

PUBLICATION DATE: 2009

FORMAT: PAPERBACK	ISBN: 9781847353740	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: EBOOK	ISBN: 9781847354136	GB: £50.00	US: \$90.00	EU: €80.00

Properties, Analysis & Testing



Author:

Gasam M. Magomedov
Georgii V Kozlov
Gennady Zaikov

Author:

Prajna De

Structure and Properties of Crosslinked Polymers

Handbook

This book gives a fresh point of view on the curing processes, structure and properties of crosslinked polymers. The general view is that the structure and properties of crosslinked polymers are defined by their density, this book demonstrates that the parameters are defined by the supermolecular (a more precisely, supersegmental structure) of the crosslinked polymers.

PUBLICATION DATE: 2011				
FORMAT: HARDBACK	ISBN: 9781847355591	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: PAPERBACK	ISBN: 9781847355607	GB: £95.00	US: \$155.00	EU: €120.00
FORMAT: EBOOK	ISBN: 9781847355614	GB: £125.00	US: \$205.00	EU: €155.00

Thermal Analysis of Rubbers and Rubbery Materials

Handbook

This book describes the use of this technique for determining additives in rubbery materials, in recycling of rubbers and in understanding the interactions of rubber - fillers and the rubber matrix. It also explains characterisation of rubber nanocomposites and other modified rubbers and their blends as well as examining instrumental techniques and crystallisation of rubbers. This book will prove invaluable reading for anyone involved in material and product development, testing, processing, quality assurance, or failure analysis in industry and laboratories.

PUBLICATION DATE: 2010				
FORMAT: HARDBACK	ISBN: 9781847351029	GB: £160.00	US: \$265.00	EU: €200.00
FORMAT: PAPERBACK	ISBN: 9781847351036	GB: £125.00	US: \$205.00	EU: €155.00
FORMAT: EBOOK	ISBN: 9781847351043	GB: £160.00	US: \$265.00	EU: €200.00

Properties, Analysis & Testing

Author:

Krzysztof Pielichowski
James Njuguna

Thermal Degradation of Polymeric Materials

Handbook

Understanding the thermal degradation of polymers is of paramount importance for developing a rational technology of polymer processing and higher-temperature applications. Controlling degradation requires understanding of many different phenomena, including chemical mechanisms, the influence of polymer morphology, the complexities of oxidation chemistry, and the effects of stabilisers, fillers and other additives.

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859574980	GB: £80.00	US: \$144.00	EU: €128.00
FORMAT: EBOOK	ISBN: 9781847350381	GB: £80.00	US: \$144.00	EU: €128.00

Thermo-oxidative Degradation of Polymers

Handbook

This book brings together information on the thermooxidative resistance of polymers to change during processing and end-use life. Our present understanding of the chemical changes of the polymer that accompany degradation are also reviewed and the analytical methods by which changes can be ascertained are also discussed. This book will be of interest to those involved in the investigation of polymer stability and studies of the mechanics of polymer degradation, to polymer manufacturers and those who use polymers to manufacture end-use articles. This book will also be of interest to those involved in the manufacture of stabilisers for oxidation resistance for use in polymer manufacture, mechanical engineers and designers of polymer products.

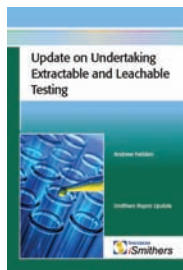
PUBLICATION DATE: 2010

FORMAT: HARDBACK	ISBN: 9781847354716	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847354723	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847354730	GB: £120.00	US: \$200.00	EU: €150.00

Author:

T. R. Crompton

Properties, Analysis & Testing



Author:
Andrew Feilden

Update on Undertaking Extractable and Leachable Testing

Smithers Rapra Updates

This Update gives a detailed, state-of-the-art review of the selection of techniques, available to the analyst, to perform a controlled extraction study for leachables and extractables, with an overview of the factors to consider when selecting the extraction technique. This book will be of interest to Chemists and R&D managers.

PUBLICATION DATE: 2011				
FORMAT: HARDBACK	ISBN: 9781847354556	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847354563	GB: £80.00	US: \$130.00	EU: €100.00

Manufacturing & Processing

Authors:
Derek M. Brewis, Ralf
H. Dahm

Compiled by:
Rapra Technology

Author:
Peter Jones

Adhesion to Fluoropolymers

Rapra Review Report

In this Rapra Review Report, the principles of adhesion are considered first. Techniques that have greatly increased our understanding of adhesion to fluoropolymers are described. Cases where good adhesion is achieved without a pretreatment are examined. However, as pretreatments are usually needed to get the required level of adhesion, this review is mainly concerned with the wide variety of methods available to pretreat fluoropolymers. A general discussion and conclusions follow.

PUBLICATION DATE: JANUARY 2012				
FORMAT: PAPERBACK	ISBN: 9781859575246	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350305	GB: £85.00	US: \$153.00	EU: €136.00

Art of Plastics Design 2005

Conference Proceedings

This first international conference, held in 2005, on The Art of Plastics Design brought together designers, manufacturers, plastics engineers and end-users, together with producers of innovative plastics materials.

PUBLICATION DATE: 2005				
FORMAT: PAPERBACK	ISBN: 9781859575352	GB: £100.00	US: \$180.00	EU: €160.00

Budgeting, Costing and Estimating for the Injection Moulding Industry

Handbook

This book discusses and defines the different methods of budgeting, costing and estimating that are normally used within the injection moulding industry. In order to establish the costing system, the operating costs first have to be identified and quantified by means of a budget. The underlying theme of this book is the maximisation of profits through the control of costs. Hence, emphasis is placed on ensuring the understanding of costing and estimating models through discussion and examples.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847352118	GB: £150.00	US: \$270.00	EU: €240.00
FORMAT: PAPERBACK	ISBN: 9781847352125	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: EBOOK	ISBN: 9781847352132	GB: £150.00	US: \$270.00	EU: €240.00

Electrospinning

Rapra Review Report

Electrospinning uses an electrical charge to form a mat of fine fibres. It shares characteristics of both the commercial electrospray technique and the commercial spinning of fibres. The technique results in the formation of uniform fibres with nanometer-scale diameters. This review report covers: History and Theory of the technique; Description of the process and apparatus; Materials, Patents and Applications.

Authors:

Jon Stanger, Nick
Tucker

PUBLICATION DATE: 2009				
FORMAT: PAPERBACK	ISBN: 9781847350916	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350923	GB: £85.00	US: \$153.00	EU: €136.00

Joining Plastics 2006

Conference Proceedings

Manufacturing with plastics often involves a bonding step from packaging, electronic and medical devices to large scale automotive, aerospace and construction projects. This is a continually developing field and experts at this second international conference on joining plastics debated the best methods and options for different applications. This conference was an excellent opportunity for plastics manufacturers, design engineers and product developers to talk to experts in the field and discuss the latest developments.

Compiled by:

Rapra Technology

PUBLICATION DATE: 2006				
FORMAT: PAPERBACK	ISBN: 9781859575703	GB: £100.00	US: \$180.00	EU: €160.00

Author:
Martin Gale

Mixing in Single Screw Extruders Handbook

This book covers the development of 'add-on' cavity mixers and floating ring mixers, together with their methodology, whilst the associated innovative techniques using liquid injection of colours, tackifiers, lubricants, crosslinking agents and foaming agents, (particularly carbon dioxide) are included. Developments in controlled levels of blending by 'chaotic mixing' to produce products with very specific properties such as barrier films is briefly described. Extrusion tests for carbon black dispersion are included and the book concludes with a practical guide to the preparation of microtomed plastics specimens for evaluation by optical microscopy.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847351302	GB: £110.00	US: \$198.00	EU: €176.00
FORMAT: PAPERBACK	ISBN: 9781847351296	GB: £90.00	US: \$162.00	EU: €144.00
FORMAT: EBOOK	ISBN: 9781847351319	GB: £110.00	US: \$198.00	EU: €176.00

Author:
John Funt

Mixing of Rubber Classic Rapra Reprint

This book will be invaluable to the rubber processor wanting to improve their competitiveness through better design and more efficient operation of their mixing equipment. In the field of rubber mixing, countless articles and texts highlight the chemist's skill in balancing the chemical and physical properties of the manufactured products. In most cases, experimenters have been concerned with how recipe changes affect the product properties while the physical processes are not considered. For the rubber processor, however, it is these mechanical operations which form the heart of his business. This book is a reprint of the definitive text on rubber mixing first published by Rapra in 1977.

PUBLICATION DATE: 2009				
FORMAT: HARDBACK	ISBN: 9781847351500	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: PAPERBACK	ISBN: 9781847354280	GB: £45.00	US: \$81.00	EU: €72.00
FORMAT: EBOOK	ISBN: 9781847351517	GB: £45.00	US: \$81.00	EU: €72.00

Manufacturing & Processing

Mould Design Guide

Handbook

This book provides an in depth guide to the design and manufacture of mould tools that work successfully in production. It highlights the necessity to design a mould tool that allows overall production to make an acceptable profit, and whilst it is recognised that not all design engineers will be able to influence the profitability factor it is an important aspect to consider. The guide focuses on designs that will produce the required production rate and quality of mouldings in a consistent and reliable fashion; the key components of a successful mould tool.

PUBLICATION DATE: 2008				
FORMAT: HARDBACK	ISBN: 9781847350879	GB: £150.00	US: \$270.00	EU: €240.00
FORMAT: PAPERBACK	ISBN: 9781847350886	GB: £125.00	US: \$225.00	EU: €200.00
FORMAT: EBOOK	ISBN: 9781847351562	GB: £150.00	US: \$270.00	EU: €240.00

Author:
Peter Jones

Practical Guide to Adhesive Bonding of Small Engineering Plastic and Rubber Parts

Practical Guide

This Practical Guide discusses the adhesive bonding of 30 of the most commonly used generic families of thermoplastics and thermoset plastics as well as a number of commonly used rubbers and elastomers. This guide provides a full explanation of the cure mechanisms and discusses the performance benefits for four types of engineering adhesives (cyanoacrylates, epoxies, two-part acrylics and UV curing adhesives). There are also chapters on joint design, dispensing systems, the surface preparation for 'difficult' plastics and information on several other adhesive technologies.

PUBLICATION DATE: 2010				
FORMAT: HARDBACK	ISBN: 9781847351395	GB: £75.00	US: \$125.00	EU: €95.00
FORMAT: PAPERBACK	ISBN: 9781847351388	GB: £50.00	US: \$80.00	EU: €65.00
FORMAT: EBOOK	ISBN: 9781847351401	GB: £75.00	US: \$125.00	EU: €95.00

Author:
Robert Goss

Manufacturing & Processing

Practical Guide to Blow Moulding

Practical Guide

When designing a product it is important to consider aspects such as a material's characteristics, the processing methods available, the assembly and finishing procedures, and the life cycle and expected performance of the product. This book presents the basics of blow moulding as well as the latest state-of-the-art and science of the industry.

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781859575130	GB: £50.00	US: \$90.00	EU: €80.00
FORMAT: EBOOK	ISBN: 9781847350411	GB: £50.00	US: \$90.00	EU: €80.00

Author:
Norman Lee

Rubber Bonding 2006

Conference Proceedings

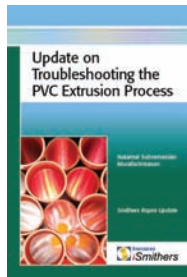
There exists an opportunity for companies to produce superior, sustainable materials faster, cheaper and more efficiently. Rapra Technology held its first international Nanopolymers Conference in June 2007. This conference provided information on the growth of nanopolymers and demonstrated their use in different industry sectors. Topics included rubber to metal bonding; bonding of anti-vibration systems; PSAs for applications such as bonding TPE weatherstrip; improving rubber to glass cord bonding for automotive applications; automotive adhesives; tyre cord bonding, and more.

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781859575550	GB: £100.00	US: \$180.00	EU: €160.00
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Compiled by:
Rapra Technology

Manufacturing & Processing



Author:

Natamai
Subramanian
Muralisrinivasan

Update on Troubleshooting the PVC Extrusion Process

Smithers Rapra Updates

This comprehensive book on troubleshooting PVC extrusion contains information on a wide range of topics with the emphasis on compounding, additives and also giving the knowledge about the combination of woody materials with PVC to wood polymer composites (WPC) is gaining more and more attraction in USA and Europe and a wide range of commercial products are already available on the market, but the troubleshooting areas are not covered well.

PUBLICATION DATE: 2011

FORMAT: HARDBACK	ISBN: 9781847355508	GB: £80.00	US: \$130.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847355515	GB: £80.00	US: \$130.00	EU: €100.00

Additive Migration from Plastics into Foods

Handbook

This book covers all aspects of the migration of additives into food and gives detailed information on the analytical determination of the additives in various plastics. This book will be of interest to those engaged in the implementation of packaging legislation, including management, analytical chemists and the manufacturers of foods, beverages, pharmaceuticals and cosmetics and also scientific and toxicologists in the packaging industry.

PUBLICATION DATE: 2007

FORMAT: HARDBACK	ISBN: 9781847350565	GB: £120.00	US: \$216.00	EU: €192.00
FORMAT: PAPERBACK	ISBN: 9781847350568	GB: £95.00	US: \$171.00	EU: €152.00
FORMAT: EBOOK	ISBN: 9781847350572	GB: £120.00	US: \$216.00	EU: €192.00

Author:

T. R. Crompton

Biodegradable Polymers

Market Report

Four main classes of biodegradable polymers are analysed in this report, polylactic acid (PLA), starch-based polymers, synthetic biodegradable polymers, such as aromatic aliphatic co-polyesters, and polyhydroxyalkanoates (PHA). The report analyses their key performance properties, applications development, market drivers and future prospects.

PUBLICATION DATE: 2006

FORMAT: PAPERBACK	ISBN: 9781859575192	GB: £300.00	US: \$540.00	EU: €480.00
FORMAT: EBOOK	ISBN: 9781847350282	GB: £300.00	US: \$540.00	EU: €480.00

Author:

David K. Platt

EU Regulation of Chemicals REACH

Rapra Review Report

REACH - Registration, Evaluation and Authorisation of Chemicals - will place a duty on companies that manufacture, import and use chemicals in the EU to assess the risks arising from their use and manage any risks identified. With industry concerns about the cost of compliance in terms of testing, in-house management, and scientific and regulatory advice and consultancy, this Rapra Review Report presents the essential details of the objectives and timescales involved with the legislation.

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859575161	GB: £85.00	US: \$153.00	EU: €136.00
FORMAT: EBOOK	ISBN: 9781847350299	GB: £85.00	US: \$153.00	EU: €136.00

Author:
Derek J. Knight

Framework for Chemical Risk Management under REACH

Handbook

As a first step, the regulatory approaches of France, Germany, Sweden and the UK are analysed and compared. On the basis of 36 interviews conducted with regulators and stakeholder representatives, the study examines how these Member States influence EU chemical regulation, and vice versa. From these findings, the research concludes that a framework for EU decision making must incorporate hazard, technical and risk-benefit approaches to risk management. As a final step, the potential operability of the proposed framework is tested using risk assessment data for 33 chemicals subject to regulatory review.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847354006	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: PAPERBACK	ISBN: 9781847354013	GB: £80.00	US: \$135.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847354020	GB: £100.00	US: \$180.00	EU: €160.00

Author:
Steffen Erler

Edited by:
Catia Bastioli

Handbook of Biodegradable Polymers Handbook

This book is a complete guide to polymers, which degrade naturally once they are finished with. This is an especially important topic at the moment as landfill space is getting less and other methods of recycling can be very costly. This book discusses the different types of biodegradable polymers, both naturally occurring and synthetic, and how they are used and the mechanisms for degradation.

PUBLICATION DATE: 2005

FORMAT: PAPERBACK	ISBN: 9781859573891	GB: £110.00	US: \$198.00	EU: €176.00
FORMAT: EBOOK	ISBN: 9781847350442	GB: £110.00	US: \$198.00	EU: €176.00

Interaction of Polymers with Polluted Atmospheres Handbook

In this book, novel results obtained by other physicochemical methods especially electron spin resonance spectroscopy are considered for various polymers. The influence of different functional groups on the mechanism of interaction of nitrogen oxides with polymers are discussed. The features of ion-radical initiation of conversions of polymers by dimers of nitrogen dioxide are also considered. Various other techniques for studying these interactions are also discussed.

PUBLICATION DATE: 2009

FORMAT: HARDBACK	ISBN: 9781847353771	GB: £120.00	US: \$200.00	EU: €150.00
FORMAT: PAPERBACK	ISBN: 9781847353795	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847353788	GB: £120.00	US: \$200.00	EU: €150.00

Author:
Gennady Zaikov

Introduction to Plastics Recycling, 2nd Edition

Handbook

As in the successful first edition, this book provides straightforward information on plastic materials and technology, including the options for recycling plastics, with special focus on mechanical recycling. This new edition reflects the great strides that have been made to increase recycling rates worldwide in recent years.

PUBLICATION DATE: 2007

FORMAT: HARDBACK	ISBN: 9781847350855	GB: £65.00	US: \$117.00	EU: €91.00
FORMAT: PAPERBACK	ISBN: 9781847350787	GB: £50.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847351548	GB: £50.00	US: \$90.00	EU: €70.00

Managing SVHCs under REACH/ Understanding and Implementing CLP 2010

Conference Proceedings

The first proceedings, *Managing SVHCs under REACH*, tackle how substances of very high concern (SVHCs) are addressed in REACH. Relevant issues include authorisation, the candidate list, stakeholder 'black lists', communication requirements (Article 33), testing for SVHCs in articles, and supply chain management and communication.

The second proceedings focus on the requirements in the CLP Regulation. The scope is broader whilst focussing on the priority areas such as the deadline for classification and labelling of substances, and notifications for the classification and labelling inventory.

PUBLICATION DATE: 2010

FORMAT: PAPERBACK	ISBN: 9781847354907	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: EBOOK	ISBN: 9781847355331	GB: £100.00	US: \$165.00	EU: €125.00

Author:
Vanessa Goodship

Compiled by:
Rapra Technology

Edited by:
iSmithers Rapra

Plastics and the Environment

Smithers Rapra Updates

This distinguished assembly of authors from across the global - and from both industry and academia - provides the reader with a distinctive perspective into this topic. *Plastics and the Environment* provides readers with a look into the environmental issues of plastics products throughout the complete product lifecycle - from material selection to product design to recycling. Topics covered include Plastics Materials and Sustainability, Environmental Design for Plastics Products, Energy Efficiency, Plastics, Recycling and Technology, and Life Cycle Assessment.

PUBLICATION DATE: 2010				
FORMAT: HARDBACK	ISBN: 9781847354914	GB: £100.00	US: \$165.00	EU: €125.00
FORMAT: PAPERBACK	ISBN: 9781847355560	GB: £80.00	US: \$135.00	EU: €100.00
FORMAT: EBOOK	ISBN: 9781847355577	GB: £100.00	US: \$165.00	EU: €125.00

Author:
Güneri Akovali

Plastics, Rubber and Health

Handbook

The dividing line between whether something is toxic and harmful to health or not (and if it is, under what conditions) is a very critical issue and therefore, there needs to be a better understanding of these systems. This book presents the available information on the eternal triangle of plastics and rubber and health, to enable a better understanding of the facts.

PUBLICATION DATE: 2007				
FORMAT: HARDBACK	ISBN: 9781847350824	GB: £110.00	US: \$198.00	EU: €153.00
FORMAT: PAPERBACK	ISBN: 9781847350817	GB: £95.00	US: \$171.00	EU: €132.00
FORMAT: EBOOK	ISBN: 9781847351524	GB: £110.00	US: \$198.00	EU: €153.00

Environmental, Health & Legislation



Author:

Abrahams Mwasha

Compiled by:

Rapra Technology

Compiled by:

Rapra Technology

Practical Guide to Green Technology for Ground Engineering

Practical Guide

In this book, the applications of both vegetable and man-made fibres in situations where there is a requirement for short-term ground reinforcement are examined and discussed. The use of vegetable fibre geotextiles (VFG), particularly in erosion control and soil reinforcement, is covered in detail, with examples from various civil engineering applications.

PUBLICATION DATE: 2011

FORMAT: PAPERBACK	ISBN: 9781847355300	GB: £55.00	US: \$90.00	EU: €70.00
FORMAT: EBOOK	ISBN: 9781847355317	GB: £55.00	US: \$90.00	EU: €70.00

REACH 2007

Conference Proceedings

Rapra's first international conference on REACH, featured case studies from the likes of Degussa, Dow Corning, Clariant, Ineos Vinyls and MBDA as well as papers from respected legal firms Keller and Heckman LLP and Eversheds.

PUBLICATION DATE: 2007

FORMAT: PAPERBACK	ISBN: 9781847350145	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847350619	GB: £100.00	US: \$180.00	EU: €160.00

REACH Europe 2008

Conference Proceedings

The REACH Europe 2008 Conference in Antwerp was specifically developed to inform all those impacted by REACH of the current status of the legislation and the developing requirements to enable REACH compliance in the most cost effective and efficient manner possible. Key themes will include: Has REACH impacted the competitiveness of the EU chemicals industry? Has there been a disproportionate burden on SMEs? Has REACH proved a barrier to innovation? What testing is required and how is this being exchanged and submitted? Will REACH provide the basis for other similar legislation outside Europe? All 19 technical papers presented at this conference are included in these conference proceedings.

PUBLICATION DATE: 2008

FORMAT: PAPERBACK	ISBN: 9781847350732	GB: £100.00	US: \$180.00	EU: €160.00
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Environmental, Health & Legislation

Compiled by:
Rapra Technology

REACH Europe 2009

Conference Proceedings

This conference provided an opportunity to assess the current status of the regulation, delegates learned from a wide range of organisations just how the regulations are working and what actions industry has taken to ensure compliance. This fifth REACH conference examined the impact that REACH has on global business - both directly and through customers in the supply chain. All technical papers presented, at this fifth international conference, are included in the proceedings.

PUBLICATION DATE: 2009

FORMAT: PAPERBACK	ISBN: 9781847353931	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847357625	GB: £100.00	US: \$180.00	EU: €160.00

REACH USA 2008

Conference Proceedings

This high profile conference was developed to enable importers, formulators, distributors and downstream users around the world to take a proactive approach to this ground-breaking legislation. REACH USA 2008 featured case studies from the likes of The Estee Lauder Companies, Eastman Kodak Company, Honeywell Specialty Materials, Hewlett Packard, Evonik Degussa and Rolls-Royce plc as well as papers from companies such as REACHReady, The Acta Group LLC and AMEC Earth & Environmental.

PUBLICATION DATE: 2008

FORMAT: PAPERBACK	ISBN: 9781847350701	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847351579	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
Rapra Technology

Environmental, Health & Legislation

Compiled by:
Rapra Technology

REACH USA 2009

Conference Proceedings

Fourth International Conference on the Registration, Evaluation and Authorisation of Chemicals

Outside of the European Union many organisations are still unaware of the risks – and opportunities - that REACH brings. REACH, the controversial chemicals policy from the EU reverses the burden of proof and puts the responsibility on the producer and importer to show that substances are safe before they can be placed on the market.

Within your company and across your supply chain REACH requires a holistic approach. Different teams, actors and customers need to forge new relationships and that is what this conference achieved.

PUBLICATION DATE: 2009				
FORMAT: PAPERBACK	ISBN: 9781847351524	GB: £100.00	US: \$180.00	EU: €160.00

REACH USA 2010

Conference Proceedings

The eighth REACH conference organised by iSmithers and sister company Smithers RAPRA coincided with advancing deadlines for REACH Registration and the widespread concerns over the implementation of the Globally Harmonised System (GHS) in Europe. These proceedings cover all the presentations from the conference, which was developed for all industry sectors to ensure they understand the practical implications and are able to meet new regulatory demands.

PUBLICATION DATE: 2010				
FORMAT: PAPERBACK	ISBN: 9781847354921	GB: £100.00	US: \$180.00	EU: €160.00
FORMAT: EBOOK	ISBN: 9781847355492	GB: £100.00	US: \$180.00	EU: €160.00

Compiled by:
iSmithers Rapra

The Underlying Foundation of Science used in the Regulation of Industrial Chemicals: Chemical Nomenclature Issues and Risk Assessment under the Toxic Substances Control Act (TSCA) in the United States and the European Union's Registration, Evaluation and Authorization of Chemicals (REACH)

Handbook

This book reviews the relevant chemical nomenclature issues in the EU and in the US and their impact on regulatory compliance. In particular, during the pre-REACH period, chemical identities frequently were described differently by different manufacturers for the same chemicals. The importance of having consistent nomenclature rules under REACH is related to the establishment of Substance Information Exchange Forums (SIEF) by ECHA after the pre-registration process, and, ultimately, industry consortia to meet registration requirements. If consistency is not established, there is a substantial risk that multiple registrations for the same substance will occur in conflict with the "One Substance, One Registration" (OSOR) principle under REACH.

Author:

Joseph E. Plamondon

PUBLICATION DATE: 2009

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Smithers Rapra Updates

This report takes a broad overview of the rubber industry and highlights the key concerns over safety that are currently being raised. Legislation in the UK and USA is discussed in depth. Safety of processing equipment is discussed as are the measures that can be taken to avoid injury from machinery. Rubber dust and fume exposures during rubber processing are considered to be general health hazards. Chemicals used in rubber manufacture/processing, particularly solvents have been responsible for many health effects in the rubber industry, these are outlined here. Recommendations for handling rubber chemicals are given. This book is a must-have for anyone working in the rubber industry whether as a producer of rubber or as a user of rubber to make end-use products.

Authors:

Naesinee Chaiear,
Nutjaree Saejiw

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