Modern Technology of Plastic Processing Industries (2nd Edition)

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Plastics are contemporary, synthetic materials. Plastics are oil and gas based, and consumes less than four per cent of our oil and gas reserves. Plastic in fact saves the energy it takes less energy to convert into plastic from raw materials. Throughout their whole life circle one-third less energy needs than making paper bags. Without plastic, whole packaging would take almost double energy by around 160 percent. The better-quality properties of plastics such as sanitized or germ free barrier properties, light weight, and durability contribute appreciably to our health and quality to way of life.

The Plastic industry has been witnessing a continuous increase in demand from a long time attracting many towards it. To all those who are looking forward for a proper understanding of technology and methodology used in the plastic industries so that they could penetrate into plastics industries with a consideration of the current industry trend then this book provides you about certain very essential information about Plastic. PVC can be processed by all the conventional conversion processes as used for other thermoplastics but with some modifications. This book covers an intensive study of Current Trends in Conducting Polymers with a significant and detail explanation of thermosetting, thermoplastic material and products environment health and the future prospects.

The content of the book includes information about plastic and allied products equipped with latest technology. It also includes comprehensive information on the development of the sector and manufacturing process. The several chapters of the book contain information about: Processing of PVC, Applications of PVC and so on. The book also has chapter that will provide you with some very interesting, feasible and profitable plastic project profiles that will act as guide in proper understanding and analysis of the sector. Recent Developments in Plastics Extrusion and Environment Health and Future Prospects, Constructive use of HDPE, The Processing of Fibre Re-in forced Thermo-
plastics Using Co-Rotating Twin Screw Extruders, Economical Film Extrusions with Modular Systems these are few chapters that are very informational and will help you in deep penetration of the industry. Along with these feature the book also encloses a directory section which list all major manufacturers of plastic processing machinery and raw material suppliers.

1. Current Trends in Conducting Polymers

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Synthesis and Properties
Technological Applications

Electromagnetic Shielding Applications
Electrooptical Display Devices
Microelectronic Devices
Photovoltaic Devices
Sensors
Scope of Conducting polymers

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Sand core bonding (Foundry)
Shellmoulds for metal castings
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Impregnation
Adhesives (Plywood Glues)
Surface Coatings
Oil Varnishes
Lamp capping cement
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Rubber Compounds
Tackifier
Aminoresins
Chemistry of the interaction of Urea and Formaldehyde
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Monomethylol Urea
Dimethylol Urea
U.F. Resin
Melamine-Formaldehyde Resin
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The Laminating Process
Melamine Resin Adhesives
Use of Wet Strength Paper
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3. Indian plastic industry : Present Status and Future Prospects

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Factors governing the performance of Indian polymer plastic Industry
The Pragmatic policy
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Methods of Compounding
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Internal Intensive Batch Mixers
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Compounder-Extruder
Twin-Screw Extruder
Custom compounding for special properties
General guidelines for PVC formulations for common product

5. Processing of PVC

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Injection Moulding
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Higher Shear Vertical Non-fluxing Mixer
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Jacketed Cylinderical Blenders
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Two Stage (Farrel) Continous High Intensity Fluxing Mixers
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World of PVC Applications

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Extrusion Blowing of PVC Sheets
Calandrette Process
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Vacuum Formed Products
Skin Packaging
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Non-Packaging Application
Tropicalised Blister Pack-A New Concept
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PVC Integral Foam Sheets
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Pet vis-a-vis PVC Stretched Bottles
Blow Moulding of PVC Bottles
Injection Blow Moulding
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Double-sided Coating of Open-Weave Fabrics
PVC in Medical Application
Moulding of PVC Footwear

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How Does Rheomolding Work?
Melt-flow oscillation improves properties

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Development of Plastic Materials

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Thermosetting Resins
Identification of Plastics

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Blow Moulding
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Pet and Apet
RPET
PETG
CPET
Chemical Reduction
Process Route of Michigan Technology University

26. Constructive use of HDPE

Characteristics

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