



## Plastics & Plastics Technology

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## Product Description

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This book is an outcome of author's desire for deeper knowledge into vital field of plastics without which it is almost impossible to imagine the modern day civilization. There has been an effort to cover all plastics used till date and fairly good details are provided regarding their chemical structure, properties and uses. Production of copolymers and poly alloys is also described. Production of Reinforced Plastics and Composites with their properties and specific uses are as well included. Because it is essential to know the physical and mechanical properties of the plastics to select these for required service conditions so methods employed to determine such properties are described in fairly good detail. Manufacturing processes to shape the plastics for specific application are detailed at length. That includes molding, casting, welding, forming, machining and miscellaneous processes like calendaring, silk-screening, pultrusion, filament winding etc. Selection of plastics for specific uses is an important consideration. So important uses of all major engineering plastics are listed. Unlike metals, identification of plastics is not easy but that knowledge is essential for reuse and recycling of them. So identification methods for plastics and their recyclability have been described as per the international norms. At the end some appendices are included that provide helpful data need for selection and use of different plastics. Some selected standards on Plastics form ASTM and BIS are also included for ready reference for use by industries and researchers alike. Finally, Indian Institutes and Universities awarding degrees and diplomas in Plastic/Polymer Engineering and Technology are also listed for the benefit of those interested in pursuing this field as their profession.

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**Chapter 1:** Polymers, Plastics and Elastomers (Rubbers). **Chapter 2:** Polymeric Materials. **Chapter 3:** Testing of Plastics. **Chapter 4:** Processing of Polymers. **Chapter 5:** Case Study: Automotive Products. **Chapter 6:** Recycling of Plastics. **Chapter 7:** Epilogue. **Appendices Bibliography Index**



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## Author

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Dr. R.S. Parmar is B.A. and B.Sc. (Mechanical Engineering) from Punjab University, M.E. (Production Engineering) from University of Roorkee (Now IIT, Roorkee) and Ph.D. (Mechanical Engineering) from I.I.T. Kharagpur. He has an experience of more than 50 years in teaching and research in different subject of Mechanical Engineering particularly related to materials and manufacturing processes and technology. He served for about 14 years at R.E.C. (Now NIT), Srinagar (Kashmir), 21 years at I.I.T., Delhi and 20 years at NSIT (Now NSUT), New Delhi. He also served for one year at Brunel University, London (U.K.) He has guided a number of Ph.D., M. Tech., and B. Tech. Research Projects and published a large number of technical papers in Indian and foreign journals on different aspects of manufacturing processes.

He is a gold medalist from University of Roorkee and has won a number of awards from Institution of Engineers (India), American Welding Society, and Indian Institute of Welding. He is a life Fellow of Institution of Engineers (India) and The India Institute of Welding and a Life Member of Indian Society of Technical Education.

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