
Reviewed by S. W. Zewari

Due to the large variety of polymeric materials and varying formulations, a comprehensive coverage of each of these materials seems to be difficult at best. This book contains discussions of a large segment of design considerations dealing with these materials. Fifteen chapters in all provide an excellent understanding of the properties and potential problems associated with these materials. The scope varies from one chapter to the next and the reader, depending on his/her background might need to consult references provided at the end of each chapter or beyond. Inclusion of a series of tables indicating chemical, physical, and mechanical properties of common polymeric materials (including optical and electrical; the coefficient of friction, colorability, flame retardancy, processing techniques, machinability, recommended adhesives, available forms, common usage, trade names, approximate prices, and manufacturers) would have proved extremely valuable for comparison purposes. I hope that these will be included in the next printing and/or in Part B.

This is the kind of book which is easy to read and stimulates an awareness of potentially costly design mistakes. I therefore recommend that graduating mechanical design students read this book. It would definitely prove to be a valuable reference for mechanical designers in electrical/electronic and similar industries.
The design guide focuses primarily on Plastic part and Mold design. It is intended to give the product designer the basic guideline to design a product that is of high quality and easy to manufacture plastic parts. It includes chapters on the Plastic materials, Part Design Considerations, Design for Assembly and some topics on Painting, Plating, and Decorating. This document is intended to be a guide and not an absolute specification. The intent is to design and build a tool that will produce a part as close to specification as possible, require the minimum of correction, and to achieve this goal. This book provides useful and necessary information on how to comprehend plastics' and composites' extreme range of properties, structural responses, product-performance characteristics, part shapes, manufacturing processes, and their influence on product performance, the simplifying of designs, as guides on selecting plastics and composites as well as on how to keep up-to-date on important information and understand the economics of designing with plastics and composites: a handbook. Figure 1-1.