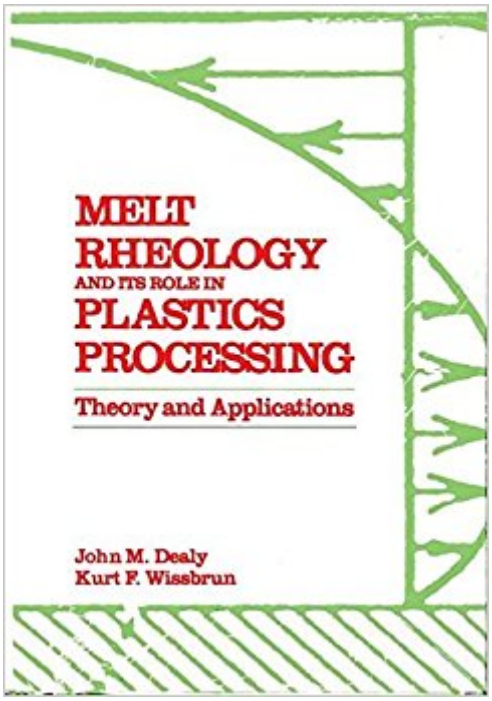
Melt Rheology And Its Role In Plastics Processing: Theory And Applications



Synopsis

This book is designed to fulfill a dual role. On the one hand it provides a description of the rheological behavior of molten polyÃ Â- mers. On the other, it presents the role of rheology in melt processing operations. The account of rheology emphasises the underlying principles and presents results, but not detailed derivaÃ Â- tions of equations. The processing operations are described qualitaÃ Â- tively, and wherever possible the role of rheology is discussed quantitatively. Little emphasis is given to non-rheological aspects of processes, for example, the design of machinery. The audience for which the book is intended is also dual in It includes scientists and engineers whose work in the nature. plastics industry requires some knowledge of aspects of rheology. Examples are the polymer synthetic chemist who is concerned with how a change in molecular weight will affect the melt viscosity and the extrusion engineer who needs to know the effects of a change in molecular weight distribution that might result from thermal degraÃ Â- dation. The audience also includes post-graduate students in polymer science and engineering who wish to acquire a more extensive background in rheology and perhaps become specialists in this area. Especially for the latter audience, references are given to more detailed accounts of specialized topics, such as constitutive relations and process simulations. Thus, the book could serve as a textbook for a graduate level course in polymer rheology, and it has been used for this purpose.

Book Information

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Customer Reviews

Great reference book on Melt Rheology for anyone working in the Plastics Processing industry. My

supervisor highly recommends this book.

I have found this book as the reader friendly in a wide spectrum of books available on polymer rheology. The authors have maintained a fine balance between mathematical theory and physical explanations. Therefore, one can get a feel of the subject while learning through this book. The language of the book is also lucid.I highly recommend this book for someone who wants to know what the equations and the theories in rheology means.Last but not least, considering the progress in last few years on theoretical front, this book needs a revision!