

Contents

Preface	xii
RHEOLOGICAL CONCEPTS	
1. Polymers as Rheology Modifiers: An Overview	2
J. Edward Glass, Donald N. Schulz, and C. F. Zukoski	
2. Rheological Measurements	18
Robert K. Prud'homme	
3. Extensional Viscometry of Polymer Solutions	48
Gerald G. Fuller and Cheryl A. Cathey	
GELS AND LATTICES	
4. Preparation, Characterization, and Rheological Behavior of Water-Swellable Polymer Networks.....	62
H. Nottelmann and W.-M. Kulicke	
5. Chemical Grafting of Poly(ethylene oxide) onto Polystyrene Latex: Synthesis, Characterization, and Rheology.....	88
H. J. Ploehn and J. W. Goodwin	
6. Electrosteric Stabilization of Oil-in-Water Emulsions by Hydrophobically Modified Poly(acrylic acid) Thickeners	101
R. Y. Lochhead	
7. Effects of Process Variables on the Emulsion and Solution Properties of Hydrophobically Modified Alkali-Swellable Emulsion Thickeners.....	121
Gregory D. Shay, Fran K. Kravitz, and Peter V. Brizgys	

ASSOCIATING POLYMERS

8. Rheological Behavior of Liquid-Crystalline Polymer–Polymer Blends 144
D. Dutta and R. A. Weiss
9. Shear-Thickening Behavior of Ionomers and Their Complexes 155
R. D. Lundberg and I. Duvdevani
10. Hydrocarbon-Soluble Associating Polymers as Antimisting and Drag-Reducing Agents 176
Donald N. Schulz, K. Kitano, I. Duvdevani, R. M. Kowalik, and J. A. Eckert
11. Association of Acrylamide–Dodecylmethacrylate Copolymers in Aqueous Solution 190
C. E. Flynn and J. W. Goodwin
12. Systems Approach to Rheology Control 207
Paul R. Howard, Edward L. Leasure,
Stephen T. Rosier, and Edward J. Schaller
13. Steady-Shear and Linear-Viscoelastic Material Properties of Model Associative Polymer Solutions 222
R. D. Jenkins, C. A. Silebi, and M. S. El-Aasser
14. Surfactant Influences on Hydrophobically Modified Thickener **Rheology** 234
David J. Lundberg, Zeying Ma, Karu Alahapperuna,
and J. Edward Glass

POLYMER–POLYMER AND POLYMER–SOLVENT INTERACTIONS

15. Polymers as Lubricating-Oil Viscosity Modifiers 256
G. Ver Strate and M. J. Struglinski
16. Solution Rheology of Ethylene–Propylene Copolymers in Hydrocarbon Solvents 273
Isaac D. Rubin and Ashish Sen

17. Rheological Properties of High-Molecular-Weight
Poly[(methyl methacrylate)-co-ethylacrylate-co-
butylacrylate] Solutions: Influence of Polymer-Solvent
Interactions 287
Wendel J. Shuely and Brian S. Ince

18. Thermal Characteristics of **waxy**, High-Pour-Point
Crudes That Respond to **Rheology** Modifiers 301
D. S. Schuster and J. H. Magill

DEFORMATION-RELATED ORIENTATIONS

19. Melt Rheology and Strain-Induced Crystallization
of Polypropylene and Its High-Density Polyethylene Blends 312
Michael S. Chuu and Boh C. Tsai
20. Dynamic Uniaxial Extensional Viscosity: Response
in Spray Applications 322
David A. Soules, Gustav P. **Dinga**, and J. Edward Glass

INDEXES

- Author Index 335
- Affiliation Index 335
- Subject Index 335