DESCRIPTION

This two-volume work is detailed enough to serve as a text and comprehensive enough to stand as a reference. Volume 1, Fluid Mechanics, summarizes the key experiments that show how polymeric fluids differ from structurally simple fluids, then presents, in rough historical order, various methods for solving polymer fluid dynamics problems. Volume 2, Kinetic Theory, uses molecular models and the methods of statistical mechanics to obtain relations between bulk flow behavior and polymer structure. Includes end-of-chapter problems and extensive appendixes.

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Robert Byron Bird is a chemical engineer and professor emeritus in the Department of Chemical Engineering at the University of Wisconsin-Madison. He is known for his research in transport phenomena of non-Newtonian fluids, including fluid dynamics of polymers, polymer kinetic theory, and rheology. Charles F. Curtiss is the author of Dynamics of Polymeric Liquids, Volume 2: Kinetic Theory, 2nd Edition, published by Wiley.