

Treatise on Adhesion and Adhesives. Volume I: Theory. Robert L. Patrick, Editor. Marcel Dekker, Inc., New York, 1967. XI + 476 pp. \$21.75.

Paralleling the growth and utilization of polymers in applications requiring effective adhesion, there has also been a rapid accumulation of scientific data leading to the elucidation of adhesion mechanisms. This treatise is a compilation of existing theories, including modifications and refinements presented by outstanding scientists in the field of adhesion. The book is organized in a logical fashion and does not favor any specific adhesion theory. It does cover the multitude of parameters that must be considered in explaining adhesion.

This volume treats adhesion by discussing intermolecular and interatomic forces, surface chemistry, adsorption of polymers, and adhesion mechanisms. In considering the strength of the adhesive bond, the contributors to this book present chapters on bulk properties, rheology, fracture mechanisms, and destructive cohesion and adhesion tests.

The chapters are well written and documented with many references and appropriate figures. It is, however, surprising to note that the chapter on "Role of Bulk Properties of the Adhesive" does not contain a single reference. The section on "Lists of Symbols" is welcome in that similar symbols in different chapters vary by definition.

This treatise devoted to adhesion theory can be highly recommended and should be used frequently as a reference source.

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