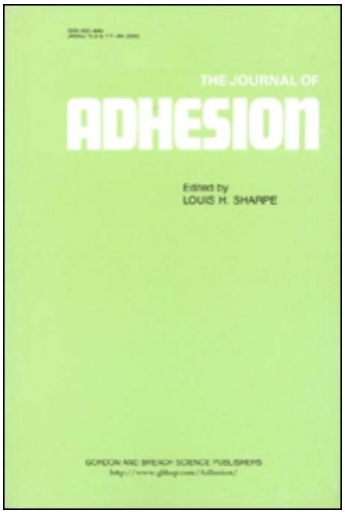

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A Review of: "SYNTHETIC ADHESIVES AND SEALANTS"

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Book Review

SYNTHETIC ADHESIVES AND SEALANTS, edited by W. C. Wake, (Critical Reports on Applied Chemistry, Volume 16), John Wiley & Sons, for the Society of Chemical Industry (Great Britain), 1987, 139 pp. (US $59.95).

The avowed aim of this series is to ". . . reflect the current state of the art . . . and to provide an overview of the scientific and technological developments affecting the chemical and allied industries . . ." The five authors of this nicely printed book have achieved that goal, and the reviews it contains can be recommended to anyone seeking an introduction to the topics which are included. However, two reservations should be stated at this point: the coverage of the volume is somewhat more selective than might be inferred from its title, and few of the authors devote much space to stating currently unsolved problems or to assessing the prospects for future advances in their fields.

A chapter on "Contact Adhesives" by R. S. Whitehouse summarizes the subject with particular reference to the footwear industry, although other applications are also described. Detailed information is presented on polychloroprenes, including the range of materials which are available and the reasons for choosing one over another; polyurethanes, acrylics and styrene-butadiene copolymers are also discussed, in slightly less detail.

A review of "Melt Adhesives" by A. Hardy gives many examples from the patent literature on polyesters, polyamides and polyurethanes, as well as a good summary of the relevant polymer chemistry and physics. The major applications mentioned are in footwear manufacture and fabric bonding.

"Toughened Acrylic and Epoxy Adhesives" are reviewed by D. J. Stamper. There is a clear discussion of the basic chemical and physical principles involved in materials selection, formulation and end-use performance, but the section on practical applications is rather brief.

W. C. Wake provides a detailed review of "Silicone Adhesives, Sealants and Coupling Agents", with a good description of the chemistry involved in their manufacture and use. He takes pains to point out some of the areas in which our current theoretical understanding lags behind practical successes. The Eastern European literature is cited as the source for many important details, presumably due to a dearth of published information from those most deeply involved in the development of these systems.

Finally, there is a comprehensive review of "Marine Organisms and Their Adhesion" by G. Walker. In addition to its obvious practical importance to the marine engineer, this subject is noteworthy for the variety of highly successful

solutions which have been achieved to the problem of securing a controlled degree of adhesion under adverse conditions. Sadly, the development of adequate counter-measures has far to go to reach a comparable level of perfection.

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