

BOOK REVIEWS

Testing of Polymers, Vol. II. J. V. SCHMITZ, Ed. Interscience, New York, 1966. 440 pp. \$19.00.

Volume II of Schmitz' series is a valuable collection of scientific and technological data about physical properties as well as testing of polymers.

Stress relaxation and other mechanical properties are discussed by R. L. Bergen, Jr. and by D. H. Kaelble in two useful reviews. J. J. Bikerman treats the wetting properties of plastic surfaces.

For the space and radiation scientists, there are chapters on cryogenic testing by J. H. Lieb and R. E. Mowers, and radiation resistance of polymers by D. J. Metz. The latter author adds a convenient listing of commercial sources of radiation equipment.

Flexural tests (H. S. Loveless) are becoming more important with the increasing use of sandwich construction. Flammability tests (L. B. Allen and L. N. Chellis) are also of immediate interest, in view of the accelerated use of plastics in building.

The chapter on hardness and wear (J. J. Gouza) reveals no fewer than 26 tests. The chapter on surface appearance, by R. S. Hunter and L. Boor, includes a discussion of Hunter's own widely used glossmeter. E. Weiss discusses ozone resistance, with particular emphasis on the unsaturated elastomers.

Processing of Numerical Test Data, by J. Mandel and T. W. Lashof, is a salutary review of the principles of statistical analysis and planning of experiments.

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Chemiefasern nach dem Viscoseverfahren, 3rd. Ed. (2 Volumes). KURT GÖTZE. Springer-Verlag, Berlin, 1967. 1282 pp. \$62.00.

This is a monumental work! Since the publication of the second edition in 1951 polymer chemistry as a whole, cellulose chemistry in particular and, most of all, the technology of viscose rayon production has made such enormous progress that a completely new plan had to be developed for the third edition. No single man could possibly cope with this tremendous task alone. Thus Dr. Götze had to look for co-workers and in doing so he was successful in assembling a list of most competent and prominent contributors for the fundamental and applied chapters for this new work. After a relatively short historical and general orientation on the subject there is presented a comprehensive and detailed description of the raw materials with special emphasis on wood pulp and its importance for the viscose process. Next, the reader is given a very thorough orientation on the fundamentals of each individual step of the transformation of the original cellulosic material into the final fiber beginning with the structure of cellulose, its relation to water and alkali and continuing to the washing and drying of the final fibers, yarns, and fabrics. The next part discusses special spinning methods, fiber properties, and structure-property relationships with particular emphasis on high wet modulus staple fibers and