Handbook Of Adhesives And Sealants

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Volume 2 of Elsevier’s Handbook of Adhesives & Sealants Series, General knowledge, application of adhesives & new curing techniques, covers the mechanisms of adhesion, its application, and drying and curing techniques. The volume is divided into the following sections: • Theory of adhesion • Metering and dispensing • Design and calculation of bonded joints • Heat stable adhesives • UV curing • Flexible bonding and sealants. Each contributing author is a scientist, practitioner, engineer, or chemist with an abundance of practical experience in their respective field, making this text a This Handbook is intended to be a reference for people needing a quick, but authoritative, description of topics in the field of adhesion and the use of adhesives and sealants. It is intended for scientists and engineers of many different backgrounds who need to have an understanding of various aspects of adhesion technology. These will include those working in research or design, as well as others involved with marketing services. It is expected to be a valuable resource for both undergraduate and research students. Contents. List of Contributors. Edward M. Petrie. Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. The most complete guide to polymeric adhesives and sealants, this second edition will provide the best opinions on the latest advances in the industry The Handbook of Adhesives and Sealants, 2nd Edition is primarily written to assist all those who have a permanent or temporary interest in adhesives and sealants. For those new to the field, the Handbook will provide a fundamental knowle
It will include 80 chapters dealing with general information, theory of bonding and sealing, design of bonding parts, technical characteristics, chemistry, types of adhesives, application, equipment, controls, standards etc. Industrial applications such as automotive, aeronautics, building and civil engineering, electronics, packaging, wood, furniture, metals, plastics and composites, textiles, footwear etc. Contributions from more than 60 authors, each a well-known specialist in their field, have been co-ordinated to produce the most comprehensive Handbook of Adhesives and Sealants ever published. The handbook will be published as 8 volumes, over a period of 4 years and will contain over 2800 pages, rich with case studies, industrial applications and the latest research. It is a work in progress, enabling the latest new and important applications to be included as they happen. Volume 2 of Elsevier’s Handbook of Adhesives & Sealants Series, General knowledge, application of adhesives & new
General knowledge, application of adhesives & new curing techniques, covers the mechanisms of adhesion, its application, and drying and curing techniques. The volume is divided into the following sections: Theory of adhesion Metering and dispensing Design and calculation of bonded joints Heat stable adhesives UV curing Flexible bonding and sealants. Each contributing author is a scientist, practitioner, engineer, or chemist with an abundance of practical experience in their respective field, making this text a Therefore, adhesives and sealants are often considered together, as they are in this Handbook. However, different specifications and test methods apply to adhesives and sealants, and most often they are designed to perform different functions. Their definitions hint at these differing functions. Both adhesives and sealants function primarily by the property of adhesion. Adhesion is the attraction of two different substances resulting from intermolecular forces between the substances. This is distinctly different from cohesion, which involves only the intermolecular attractive forces within a single substance.
Adhesion is a phenomenon of interest in diverse scientific disciplines and of importance in a wide range of technologies. It is arranged in a user-friendly format with ten main sections: theory of adhesion, surface treatments, adhesive and sealant materials, testing of adhesive properties, joint design, durability, manufacture, quality control, applications, and emerging areas. Each section contains about five chapters written by internationally renowned authors who are authorities in their fields. This book, containing bountiful information, should serve for veterans as a commentary on the current state of knowledge regarding adhesives, and as a Baedeker for those who wish to make their maiden voyage into the wonderful and technologically important area of adhesives. The history of adhesives and sealants is closely related to the history of humankind. Some of what are thought of as relatively "new" uses of adhesives have their origins in ancient times, and although most of these materials have been subject to vast changes, others have been changed very little over time. As new materials are developed, a review of the history of uses can lead one to see where they might be applied to improve old applications, and sometimes to satisfy requirements of entirely new applications.