Epoxy Resins Technology Handbook (Synthesis, Epoxy Resin Adhesives, Epoxy Coatings) with Manufacturing Process and Machinery Equipment Details (3rd Edition)

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About the Book

Epoxy is a term used to denote both the basic components and the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resin are a class of thermoset materials used extensively in structural and specialty composite applications because they offer a unique combination of properties that are unattainable with other thermoset resins.
Epoxies are monomers or prepolymers that further reacts with curing agents to yield high performance thermosetting plastics. They have gained wide acceptance in protecting coatings, electrical and structural applications because of their exceptional combination of properties such as toughness, adhesion, chemical resistance and superior electrical properties. Epoxy resins are characterized by the presence of a three membered cycle ether group commonly referred to as an epoxy group 1, 2-epoxide, or oxirane. The most widely used epoxy resins are diglycidyl ethers of biphenyl-A derived from biphenyl-A and epichlorohydrin.
The market of epoxy resins are growing day by day. Today the total business of this product is more than 100 crores. Epoxy resins are used for about 75% of wind blades currently produced worldwide, while polyester resins account for the remaining 25%. A standard 1.5-MW (megawatt) wind turbine has approximately 10 tonnes of epoxy in its blades. Traditionally, the markets for epoxy resins have been driven by demand generated primarily in areas of adhesives, building and civil construction, electrical insulation, printed circuit boards, and protective coatings for consumer durables, amongst others.
The major contents of the book are synthesis and characteristics of epoxy resin, manufacture of epoxy resins, epoxide curing reactions, the dynamic mechanical properties of epoxy resins, physical and chemical properties of epoxy resins, epoxy resin adhesives, epoxy resin coatings, epoxy coating give into water, electrical and electronic applications, analysis of epoxides and epoxy resins and the toxicology of epoxy resins and photographs of machinery with suppliers contact details.
A total guide to manufacturing and entrepreneurial success in one of today's most epoxy resin industry. This book is one-stop guide to one of the fastest growing sectors of the epoxy resin industry, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on the commercial production of epoxy resin product. It serves up a feast of how-to information, from concept to purchasing equipment.

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