Manufacturing Process of Epoxy Resins with Formulation (Synthesis, Epoxy Resin Adhesives and Epoxy Resin Coatings)

Description:

Epoxy is a term used todenote both the basic components and the cured end products of epoxy resins, aswell as a colloquial name for the epoxide functional group. Epoxy resin are aclass of thermoset materials used extensively in structural and speciality compositeapplications because they offer a unique combination of properties that areunattainable with other thermoset resins.

Epoxy resins arecharacterized by epoxy equivalent (EEVV)/epoxy value, hydrolysablechlorinecontent, total chlorine content, viscosity/softening point, volatile content,colour, clarity, hydroxyl value, ionic iron, sodium and chlorine contents. Epoxyresins are a group of synthetic resins, which are used to make adhesives andplastics. Owing to their versatility, high resistance to chemicals, durability,excellent adhesion, toughness, high electrical resistance, strong durability atboth low and high temperatures, and ease they offer while pouring on castwithout forming any bubbles, epoxy resins are becoming an integral part ofvarious commercial and industrial sectors.

Epoxy based solutioncoatings are used in maintenance and product finishes, marine finishes, masonryfinishes, structure steel coatings and tank coatings, aircraft finishes, applianceprimers, automotive primers, car and drum linings, furniture finishes and collapsibletube coatings. They are used for concrete floor paints, gym and floor varnishes,spar varnishes etc. Epoxy Resins are also used in decorative floorapplications, as chemically resistant mortars and floor topping compound; inprinting inks, in fabric treating applications in dental, surgical andprosthetic applications for breaking petroleum emulsions and for light weightchemically resistant foams.

The epoxy resins are usedas additives for a variety of other plastic materials, such as vinyl andacrylic resins and natural and synthetic rubbers.

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Keywords: Epoxy Resins Manufacturing, Manufacturing Process of Epoxy Resins, Epoxy Resins Formulation, Epoxy Resin Synthesis, Epoxy Resin Adhesives, Epoxy Resin Coatings, Epoxide-Curing Reactions, Properties of Epoxy Resins, Electrical and Electronic Applications, Sealants and Foams, Epoxides and Epoxy Resins, Toxicology of Epoxy Resins

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