

Lignin polymerization of epoxy compound -2

Shirai shiN, also try after chemical modification of lignin synthesis - epoxy adhesive. In order to improve the reactivity of lignin, the alkali lignin phenol first with bisphenol A, phenol process, adding a small amount of hydrochloric acid or BF₃ catalyst. Bisphenol A phenol-modified material in order to enhance the solubility of lignin, lignin obtained - Epoxy completely soluble in certain organic solvents include acetone, and measured using two different purified lignin (sugar content <4.5% and 11.7%) of the synthesized lignin two epoxy adhesive performance, less sugar found in 11.7% lignin bonding properties of synthetic resin which is better, there may be a saccharide units are involved in the reason.

At 140 °C hot curing 5min, two kinds of epoxy resin has a satisfactory dry lignin, wet strength, while in the liquid added to the resin to improve the quality of CaCO₃ - epoxy adhesive bond performance, because it The alkaline agent can be used as a curing accelerator, and serve to strengthen the effect as a filler. Outside, HCl, and BF₃ as the lignin phenolic hydroxyl group introduced on an effective catalyst. Found using BF₃-glycerol complex catalyst can be introduced only phenolic hydroxyl group, alcoholic hydroxyl group can be introduced. When there is an epoxy value of 0.48 BF₃, and in the epoxy value 0.38 with HCl. BF₃ catalyst using this synthetic resin, the use of triethyl diamine as a crosslinking agent, heat-pressed at 140 °C Maintenance, and tested using it as plywood adhesive performance, the results show that BF₃ as a catalyst increases its water resistant adhesive strength.