G11.08

New Retardant for Long Pot-Life Epoxy Resins

*Payman Razeghi Khosravieh (a,b), Mojtaba Hamedian Moghaddam (a), Ali A. Yousefi (a,b)

(a) Research Center of Bandar Imam Petrochemical Company, Iran(b) Amirkabir University of Technology, Mahshahr, Khuzestan, Iran

Epoxy resins are useful engineering polymers. Because of specific physical and mechanical properties, epoxy resins are used in composites as matrix in many applications. Due to perfect adhesion and chemical resistance, these are used in flooring and wall coating in buildings adhesion and paint industry. These polymers are not cross linkable by itself and might be cross linked by curing agent, heating or radiation. In industrial applications, it is easier to cure them by chemical curing agents. The best curing agents of epoxy resins are poly amines and poly amino amides. Serious problem of these curing agents is short pot-life. Some attempts have been done in order to increase pot life but it has not been achieved yet. In this research we used some chemicals to Synthesize an adduct to increase the pot-life of epoxy resins without considerable decrease in chemical and mechanical properties of cured film of epoxy resins.