

Effect of phenolic compound *Irganox-1010* on elastic-strength properties and thermostability, heat resistance of molded polyurethane polyester

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Abstract

The introduction of the phenolic compound *Irganox-1010* into the composite structure of polyurethane molding SCU-6 is an effective method for increasing its thermostability and heat resistance. This conclusion is confirmed by the results of investigation into stress-strain, thermomechanical and thermogravimetric characteristics of polyurethane compositions containing *Irganox-1010*. Based on these data and the results of quantum-chemical study of the interaction of isocyanates with hydroxyl compounds, the mechanism of stabilizing effect of phenolic compounds has been proposed.