

Characteristics of polyurethane foam by acrylonitrile and methacrylic acid modified polyol

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The polyol-polymer is the designation given to a group of polyols dispersions which are produced by free radical polymerization of monomer in the polyether polyol. It is also produced in the polyol in suit by reaction with other components. Polyurethane using polymer-polyols has higher mechanical properties than polyurethane using common polyol. For the improve of mechanical properties in polyurethane foam, we synthesized Graft copolymer-polyols. The polymer-polyols were prepared by polymerizing vinyl monomers such as acrylonitrile, methacrylic acid in the presence of polypropylene glycol, and 2,2-azobisisobutyronitrile was used as an initiator. Polyurethane foam was synthesized by one shot process method. Various mechanical properties of the polyurethane foam were examined.