

Abstract**HIGH-TEMPERATURE AND HIGH-HUMIDITY RESISTANT OPTICALLY
CLEAR ADHESIVE, PREPARATION METHOD THEREFOR, AND
APPLICATION THEREOF**

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The invention relates to the technical field of optically clear adhesives, in particular relates to a high-temperature and high-humidity resistant optically clear adhesive, and its preparation method and application. A high-temperature and high-humidity resistant optically clear adhesive comprises 40 parts to 55 parts of a soft monomer, 10 parts to 25 parts of a hard monomer, 5 parts to 20 parts of a functional monomer, 5 parts to 15 parts of thiourea monomer, 3 parts to 15 parts of a polyurethane acrylate prepolymer, 0.2 parts to 2 parts of a photoinitiator, 0.05 parts to 2 parts of a chain transfer agent, 0.1 parts to 1 part of a tackifier coupling agent, 0.1 parts to 1.5 parts of an antioxidant, 0.05 parts to 1 part of a levelling agent, and 0.05 parts to 1.5 parts of a crosslinker, wherein the polyurethane acrylate prepolymer is primarily prepared by a reaction of a polyol, a polyisocyanate, and a hydroxyl-containing acrylate. The optically clear adhesive of the present invention not only exhibits high light transmittance but also maintains excellent adhesion, stability, and durability in extreme environments of high temperature and high humidity.

(No illustrative figure)