Title (en)

RAPID-CURING ADHESIVE COMPOSITION

Title (de)

SCHNELLHÄRTENDE KLEBSTOFFZUSAMMENSETZUNG

Title (fr)

COMPOSITION ADHESIVE A DURCISSEMENT RAPIDE

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Application

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Abstract (en)

[origin: WO9958622A1] A rapid-curing adhesive composition is provided which comprises liquid component (A) and (B). The liquid component (A) consists essentially of an aqueous solution or dispersion containing: (a) a water soluble polymer having a carboxyl group and a hydroxyl group in the molecule thereof; and (b) an aqueous polymer having at least one of a primary amino group and a secondary amino group in the molecule thereof. The liquid component (B) consists essentially of an aqueous solution or dispersion containing (c) a water soluble aldehyde compound. The rapid-curing adhesive composition of the present invention can quickly exhibit its initial adhesive strength, and is superior in penetration property, post-curing adhesive strength and water resistance. More specifically, when the liquid components (A) and (B) are respectively applied on two mating surfaces and the surfaces are brought into contact with each other, the aqueous polymer (component (b)) in the liquid component (A) instantaneously reacts with the water soluble aldehyde compound (component (c)) in the liquid component (B) to give a gel. The gel has a small molecular weight and, hence, has a proper elasticity and viscosity thereby to readily penetrate into the surfaces. The intact water soluble polymer (component (a)) in the liquid component (A) also readily penetrates into the surfaces. Further, a gelation reaction between the water soluble polymer (component (a)) and the water soluble aldehyde compound (component (c)) starts thereby to polymerize the gel in the mating surfaces. The two-step gelation allows the adhesive composition to exhibit its initial adhesive strength in a short time and to have an excellent penetration property and high post-curing adhesive strength.

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