

UV-Curable, Optically Clear Laminating Adhesives

Features

- Fast cure
- Excellent adhesion to plastics, glass and metal
- Good wetting performance
- **NON YELLOWING** against heat (100 to 125 °C) for extended period of time

Description

- UV curable, optically clear heat resistance laminating adhesives.

APPLICATIONS

Bonding and laminating applications

Liquid

	<u>AC A109-TM</u>	<u>AC A109-TR</u>
Viscosity (cps, 25 °C)	9,000 to 13,000	6,500 to 7,500
Storage temp (°C)	20 - 25	20 - 25
Shelf life (at 20 - 25 °C)	6 months	6 months
Pot life (at 20-25 °C)	3 months	3 months

Cured film

Water absorption (% , 100 °C, until saturation)	0.25	0.25
Shrinkage (linear, %)	<0.3	<0.3
Depth of cure (mm)	10	10
Glass transition temperature (°C)	46	46
Coefficient of thermal expansion (TMA), 75 µm film		
Tensile strength, MPa	2.5	2.5
Elongation (%)	900	900
Modulus, MPa	2	2
Physical properties, 25°C, 50% RH (ASTM D638)		
Below Tg (x10 ⁻⁶), °C ⁻¹	180	180
Below Tg (x10 ⁻⁶), °C ⁻¹	250	250

UV curing conditions

Spot cure system – UV dose (J/cm²)

250 – 450 nm filter, 1 to 2 1 to 2

Suggested curing set-up:

Intensity: 100 mW/cm², Cure time: 20 sec, Cure distance: 1 cm

Flood cure system – UV dose (J/cm²), air

0.5 to 1 0.5 to 1

Medium or high pressure mercury or Fusion UV lamp with minimum intensity 50 mW/cm². A light source producing 220 to 370 nm is best match for these two adhesives. Cure speed or tack free time depends on the intensity of the UV source, thickness of adhesive layer, and transmission of the substrates.

Operating temperature (°C) -40 to 125 -40 to 125

STORAGE

These products are light sensitive. They should be stored in the original container in a cool and dry place. They should be kept away from heat and light to obtain the maximum shelf life. Improper storage may result in gelation of the product.

SAFETY AND HANDLING

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution. Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read [Material Safety Data Sheet](#) before handling.

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