

PRODUCT SPECIFICATION

100-G

UV Adhesive

Description:

Formulated for optical clarity and high-strength bonding, this single-component, clear, colourless, low viscosity UV curable adhesive cures rapidly upon exposure to ultraviolet light. As a 100% solids system, it offers significant operational advantages for applications where the bond line is exposed to UV radiation.

The adhesive is specifically engineered to form optimal, crystal-clear bonds between glass surfaces, metals, wood, and glass-filled materials. Additionally, its low viscosity delivers excellent capillary wicking action while minimising bubble formation during application.

Typical Properties of Cured/Uncured Material:

Liquid State		Cured State	
Base	Urethane Methacrylate	Tensile Strength, ASTM D882 (psi)	39975
Colour	Clear	Elongation @ break (%)	12
Specific Gravity (25°C)	1.2	Hardness, ASTM D2240 Shore D	70
Refraction Index (25°C)	1.509	Tg, ASTM D3418-82 (°C)	45
Viscosity (cP)	100	Water Absorption, ASTM D570 (%)	5.8

UV Curing System:

Lamp Type	5" x 5" Flood	3/16" Spot	1" x 6" Focused
Max. Lamp Intensity @ 365 nm	300 mW/cm ²	4000 mW/cm ²	8000 mW/cm ²
Adhesive Absorption Range (nm)	300 - 500	300 - 500	300 - 500
Cure Speed (Sec)			
Glass to Glass Bonding	3	6	<1
Surface Cure Speed	7	7	<1

Bond Strength

(Shear Strength, psi, ASTM D4501):

Substrate	psi	N/mm ²
Steel to Glass	3550	24
Aluminium to Glass	3450	23
Glass to Glass	4000	27

Cure Conditions:

Cure can be achieved using both low and high-intensity UV light sources. Under a low UV intensity of 30 mW/cm, highly transmissive substrates with joint gaps under 0.25 mm (0.010") cure in 5 seconds, while gaps of 1.75 mm to 2.25 mm (0.070" to 0.090") cure within 10 to 20 seconds. Under a high UV intensity of 100 mW/cm, highly transmissive substrates with gaps under 0.25 mm (0.010") cure in 2 seconds, while larger gaps of 2.5 mm to 5.0 mm (0.100" to 0.200") achieve full cure within 10 to 20 seconds.

Directions For Use:

This adhesive is UV sensitive. Exposure to daylight, UV light and artificial lighting should be kept to a minimum during storage and handling. Adhesive product should be dispensed from applicators with black feed lines. For best performance bond surfaces should be clean and free from grease.

UV cure rate is depends on lamp intensity, distance from light source, depth of cure needed or bond line gap and light transmittance of the substrate through which the radiation must pass.

Recommended intensity for cure in an adhesive application are 40-mW/cm² minimums with an exposure time of 5-6 times the fixture time at this same intensity. For tack free surface cure, as necessary in coating, potting or tacking applications, higher intensity UV is required.

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