

PRODUCT SPECIFICATION

19000-G

UV Adhesive

Description:

Formulated for heavy-duty structural applications, this single-component, high strength, high viscosity UV curable adhesive cures in seconds upon exposure to ultraviolet light. It is specifically engineered to form exceptional, high-integrity bonds between glass-to-glass and glass-to-metal assemblies, as well as a wide range of dissimilar substrates.

The resulting joint is flexible, impact-resistant, and weather-resistant, offering outstanding stability against prolonged humidity, water immersion, and environmental cycling. Its high viscosity prevents slump and run-off prior to cure, making it an ideal choice for vertical gap-filling and demanding applications where long-term durability and structural reliability are required.

Typical Properties of Cured/Uncured Material:

Liquid State		Cured State	
Base	Urethane Methacrylate	Tensile Strength, ASTM D882 (psi)	3,775
Colour	Clear	Elongation @ break (%)	38
Specific Gravity (25°C)	1.1	Hardness, ASTM D2240 Shore D	75
Refraction Index (25°C)	1.465	Tg, ASTM D3418-82 (°C)	39
Viscosity (cP)	18,000-20,000	Water Absorption, ASTM D570 (%)	5.9

UV Curing System:

Lamp Type	5" x 5" Flood	3/16" Spot	1" x 6" Focused
Max. Lamp Intensity @ 365 nm	300 mW/cm2	4000 mW/cm2	8000 mW/cm2
Adhesive Absorption Range (nm)	300 - 500	300 - 500	300 - 500
Cure Speed (Sec)			
Glass to Glass Bonding	9	9	<4
Surface Cure Speed	10	11	<4

Bond Strength

(Shear Strength, psi, ASTM D4501):

Substrate	psi	N/mm ²
Steel to Glass	3550	24
Aluminum to Glass	3750	25
Glass to Glass	3950	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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