

PRODUCT SPECIFICATION

150-M

UV Adhesive

Description:

Designed for high-precision plastic bonding, this fast-curing, low-viscosity UV-curable adhesive is specifically formulated for plasticised PVC, polyurethane, polycarbonate, and polystyrene. It cures rapidly through UV-blocked substrates to deliver strong, impact-resistant, and flexible joints within seconds. Exhibiting excellent weather resistance and broad polymer compatibility, this grade is particularly well-suited for demanding assembly applications, including medical device manufacturing.

Typical Properties of Cured/Uncured Material:

Liquid State		Cured State	
Base	Urethane Methacrylate	Tensile Strength, ASTM D882 (psi)	3,100
Colour	Clear	Elongation @ break (%)	28
Specific Gravity (25°C)	1.1	Hardness, ASTM D2240 Shore D	65
Refraction Index (25°C)	1.485	Tg, ASTM D3418-82 (°C)	49
Viscosity (cP)	100-200	Water Absorption, ASTM D570 (%)	1.1

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	6	5	<3
Surface Cure Speed	10	10	<5

Bond Strength

(Shear Strength, psi, ASTM D4501):

Substrate	psi	N/mm ²
PVC to PVC	2750	18
PVC to PC	2500	17
PC to PC	2800	19
ABS to PC	2300	15

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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