

PRODUCT SPECIFICATION

1550-M

UV Adhesive

Description:

Engineered specifically for needle-hub assembly in disposable medical devices, this single-component, 100% solids light-curing adhesive provides rapid, reliable bonding under UV and visible light. The acrylate-based formulation is fully compliant with ISO 10993-5 medical biocompatibility standards, ensuring safety in critical healthcare applications.

Exhibiting exceptional adhesion to both stainless steel cannula metals and medical-grade plastics, it delivers high-strength, durable joints with excellent optical clarity. Its fast cure profile and controlled flow characteristics optimise high-speed production of syringes, tubings, and other single-use medical devices where uncompromising bond integrity is paramount.

Typical Properties of Cured/Uncured Material:

Liquid State		Cured State	
Base	Acrylated urethane resin	Elongation @ break (%)	100
Colour	Clear	Hardness, ASTM D2240 Shore D	70
Specific Gravity (25°C)	1.1		
Viscosity (cP)	1400 - 1700		

UV Curing System:

Lamp Type	UV
Max. Lamp Intensity @ 365 nm	400 mW/cm ²
Cure Speed (Sec)	
Surface Cure Speed	<20

Bond Strength

(Shear Strength, psi, ASTM D4501):

Substrate	psi	N/mm ²
PET to Steel	2000	13
ABS to PC	2000	13
PVC to Acrylic	1800	12

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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