



# UV150

## High Strength, Medium Viscosity Bonder

### DESCRIPTION

UV150 Structural UV Glass Bonder is a highly reactive urethane methacrylate resin that is designed for all types of glass bonding. The liquid is highly reactive to UV light, forming glass to glass, or glass to metal bonds in seconds.

UV150 Structural is also resistant to ageing once cured, exhibiting excellent strength retention properties, and resists the action of yellowing during long-term exposure to the elements.

### CURING CHARACTERISTICS

UV365N is needed to cure UV150. Some lamps provide a secondary cure at lower wavelengths which assist in cure.

Heat is generated by some high-intensity (high powered) lamps. This can cause problems by overexposure and increased reactivity in the resin, building up excessive heat or stress.

Ideal conditions can be provided by optimising some of the work parameters. Low intensity lamps will give slower cure and take longer to cure big gaps.

Examples are as follows: for UV 150

10mW/cm <sup>2</sup>	>0.25mm up to	0.5mm gap
	Approximate time	80-100 seconds
	>0.05mm up to	0.1mm gap
	Approximate time	40-60 seconds

50-100mWcm <sup>2</sup>	>0.25mm up to	0.5mm
	Approximate time	15-20 seconds
	>0.05 up to	0.1mm gap
	Approximate time	5-10 seconds

Distances can effect cure times. Cure times are faster if adhesive is not exposed to air. Drying times will be longer for the material that is exposed to air.

High-intensity lamps are needed to get dry to touch bonds. Glass thickness has an effect on cure time even on clear material causing reflection and a degree of absorption. Opaque glass or tinted glass will give irregular results.

Bond strengths reduce at elevated temperatures. Typically to 30% for cured material tested at 120°C in comparison to its ambient results at 20°C.

### DIRECTIONS FOR USE

Suitable surface preparation is recommended, ensuring grease/oily films or other contaminants such as those found in some glass cleaners are not present. The adhesive can be applied directly from the container. Ensure bubbles are removed before bonding begins. Cured excess material outside of the joint can be removed by cutting. Light intensity, distance and UV wave band(s), all contribute to bonding. Excessive/uneven cure area can contribute to stress build up in large parts. Ensure good uniform displacement of adhesive is made on parts and also that the UV light is evenly distributed over the parts. Heat can be generated by UV lamps. To ensure operator safety avoid overheating of the parts to be bonded.

### FULLY CURED STATE

Typical Hardness:	.....	70-75 (Shore D)
Tensile Strength:	.....	25 N/mm <sup>2</sup>
Elasticity:	.....	Approx, 150%
Minimum Gap Size:	.....	0.05mm
Maximum Gap Size:	.....	0.15mm
Typical Bond Strength:	.....	10-15 N/mm <sup>2</sup>
Operating Temperature:	.....	-50°C +125°C
Environmental Resistance:	....	Excellent
RH98% @ 20°C		
Solvent Resistance:	.....	Good
Use on Plastics:	.....	Tests Recommended
Viscosity:	.....	2500cps

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