

BD8500

High Performance Methacrylate Adhesive

1. DESCRIPTION

BD8500 is a two-part ultra-tough non sag structural methacrylate adhesive specially designed for the structural bonding of various substrates, including galvanized steel, aluminum, gel coats, and for plastics and composites. Combined at a ratio of 10:1, BD8500 has a working time of 20 to 25 minutes and achieves nearly 80 percent of its ultimate strength in 40 minutes at room temperature curing. BD8500 provides high strength and excellent peel and impact strength on steel and aluminum with limited or no surface preparation. BD8500 has high temperature resistance properties and can withstand baking/powder coating temperature resistance up to 180°C for 60 minutes. Contain glass beads (0,010" Diameter) to control bond line thickness.

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2. CHARACTERISTICS:

Room Temperature Cure

Properties

- | | |
|-------------------------------|---|
| • Working Time | 20 to 25 minutes (at 75°F/ 24°C) |
| • Fixture Time | 40 to 50 minutes (at 75°F/ 24°C) |
| • Full Operating Temp. | -40°F to 250°F (-40°C to 121°C) |
| • Time to structural strength | 60 minutes |
| • Full cure time | 24 hours |
| • Gap Filling | 0.35 – 0.5 inches |
| • Mixed Density | 8.2 lbs./gal (.98 g/cc) |
| • Elongation at break: | 30 |
| • Flash Point | 51°F (11°C) – See SDS for more safety information |
| • Hardness, Shore D | 70 |

3. CHEMICAL RESISTANCE:

Excellent Resistance to:

- Hydrocarbons
- Acids and Bases(3-10PH)
- Vinegar
- Salt Solutions

Susceptible to:

Polar Solvents
Super Strong Acids and Bases

4. PHYSICAL PROPERTIES:

Uncured:

- | | | |
|---|--|-------------------------------------|
| • Viscosity(cps) | 90,000 – 130,000 | Activator
60,000 – 80,000 |
| • Color | off white | Blue/black/natural |
| • Density (lbs./gal) | 8.2 | 8.5 |
| • Mix Ratio (wt. or vol) | 10 | 1.0 |
| • Mixer Recommendation Cartridge (250/490ml): | MFQX 08-24T – Square 24 element
nge/Green Mix Tips (10:1) | |

5. MECHANICAL PROPERTIES:

Tensile Strength (ASTM D638)	Substrate	Results	Failure Type
• Strength, psi	Fiberglass Surfaces	1500-1800	Substrate
• Strength, psi	Galvanized Steel	1800 -2200	Cohesive
• Strength, psi	Steel/Stainless Steel	2,500 – 3,500	Cohesive
• Strength, psi	Aluminum	2,500 – 3,500	Cohesive

6. HANDLING AND APPLICATION:

BD8500 is flammable. Contents include Methacrylate ester and acids. Keep containers closed after use. Wear gloves and safety glasses to avoid skin and eye contact. Wash with soap and water after skin contact. In case of eye contact, flush with water for 15 minutes and get medical attention. Harmful if swallowed. Keep out of the reach of children. Keep away from heat, sparks, and open flames. Do not smoke cigarettes or anything else while handling or near the product. Refer to the BD8500 Safety Data Sheet for more complete safety instruction. To assure maximum bond strength, surfaces must be mated together within the specified working time, and all clamps affixed within that time. Use sufficient material to ensure that the joint is completely filled when parts are mated and clamped. Avoid over clamping parts, which may cause a dry joint or a joint starved of adhesive. All adhesive application, part positioning, fixturing, and clamping should occur before the working time of the adhesive has expired. After the indicated working time, parts must remain undisturbed until the fixture time is completed. Components bonded, adhesive, and shop temperature can have a significant effect on the work and fixture time of the adhesive. Application of BD8500 adhesive at temperatures between 65°F and 85°F (18°C and 30°C) will ensure proper cure. Temperatures below 65°F (18°C) will slow cure and fixture speed. BD8500 adhesives will still react but will take longer. Temperatures above 85°F (18°C and 30°C) will increase cure and fixture speeds, and there's a risk that the adhesive will be hardened or too thick to bond materials. The viscosities of BD8500 adhesives are affected by temperature.

7. HANDLING AND STORAGE

The shelf life of BD8500 is twelve (12) months from the date of manufacture based upon continuous storage at room temperature (77°F or 25°C). Storage of BD8500 adhesives in refrigerated compartments will extend the shelf life even more. Do not store BD8500 adhesive or any other adhesives in a refrigerator which has food or lunch products in them. Be sure to bring BD8500 adhesives to room temperature for 24 hours before use, otherwise longer cure and fixture times may be expected. Long-term storage at temperatures above room temperature will shorten the shelf life of BD8500 adhesives considerably. Storage at temperatures above 28°C could shorten the shelf life to less than one month. BD8500 adhesives contain no water, so freezing of the adhesive for short periods is permissible but is not encouraged.

8. ADDITIONAL INFORMATION

NOTE: Information contained herein is based on tests we believe to be reliable and accurate. It is offered in good faith for the benefit of the consumer. The Company shall not be liable for any injury, loss, or damage in the use or handling of its chemical products since conditions and use are beyond our control. In every case, we urge and recommend the user conduct tests to determine to their own satisfaction that the product is of acceptable quality and suitability for their particular purpose under their own operating conditions. Statements concerning possible use of our products are not intended as recommendations to use our products in the infringement of any patent, or for any particular purpose or application. These products are intended for industrial use only.