

Technical Data Sheet

MP-55420

MP-55420 is a high-performance two-part structural methacrylate adhesive designed for bonding a wide range of materials, from plastics and metals to composite assemblies. Engineered for durability, it delivers exceptional strength with superior flexibility, impact resistance, and weatherproofing. MP-55420 excels in bonding dissimilar surfaces and provides outstanding resistance to extreme conditions - withstanding temperature fluctuations, thermal cycling, and harsh chemicals. Its advanced formulation ensures long-lasting reliability without the need for any surface preparation to meet the needs of most applications.

Technology / Base	Methyl Methacrylate (MMA)
Type of Product	Structural Adhesive
Components	Two component
Curing	Room Temperature Cure
Appearance / Color	Off White or Amber
Consistency	Viscous Liquid

Features and Benefits

- No Surface Preparation Required
- Excellent Adhesion Properties
- Excellent Strength to Metals, E-Coat, Thermoplastics, Thermosets, and Engineering Plastics
- Excellent Impact Resistance
- Suitable for Easy Manual and Pneumatic Dispensing
- Excellent Thermal Performance
- 100% Reactive
- Room Temperature Cure
- 10:1 meter-mix product for ease of application

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Rheology		Condition/Method
Viscosity - Resin	130,000 - 180,000 cPs	Brookfield RV7, 20 RPM, 25°C
Viscosity - Activator	40,000 - 80,000 cPs	Brookfield RV7, 20 RPM, 25°C
Thixotropic Index	5	Brookfield RV7, 20/2 RPM, 25°C
Density		
Mixed Density	0.95 g/cc	
Mix Ratio		
Volume Mix Ratio	10:1	
Weight Mix Ratio	10:1	
Uncured Material Characteristics		
Flash Point	51°F	
Open Time	4 - 6 Minutes	
Fixture Time	9 - 16 Minutes	
Cure Time	24 hr	25°C
Cured Mechanical Properties		
Gap Fill Dimension	0.25 inch	
Hardness	45 Shore D	ASTM D2240
Tensile Strength	3190 to 4640 psi (22 to 32 MPa)	ASTM D638
Over Lap Shear Strength (Average)		
Carbon Steel	3000 psi	ASTM D1002, 25°C 50% RH
Aluminum	2900 psi	ASTM D1002, 25°C 50% RH
Cured Thermal Properties		
Thermal Service Range	-67°F to 250°F	

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Recommended For

METALS

- Aluminum
- Steel
- Stainless
- E-Coated Metal

THERMOSETS

- Fiberglass
- Phenolic
- Gel Coat
- Epoxy
- RIM Urethane
- Polyurethane
- Liquid Molding Resin

THERMOPLASTICS

- Acrylic
- ABS
- Polycarbonate
- Nylon/PA
- PPO
- Vinyl
- PVC
- Styrene
- Peek
- PBT Blends
- PET Blends

General Instructions

The product is best used at temperatures between 65°F and 80°F. Temperatures below 65°F will slow the cure speed of the material and viscosities will be higher. Temperatures above 80°F will cause the material to cure faster and viscosities will be lower. For consistent dispensing maintain temperature in the above mentioned range.

For optimum bond strength and to insure maximum performance in the finished assembly mate parts together within the specified work time of the adhesive. Make sure the bond joint has uniform coverage and that a sufficient amount of adhesive is in the bond area. It is important to have the adhesive applied, parts aligned and positioned, within the established work times for the product. To ensure maximum performance in the finished assembly parts should remain undisturbed until the fixture time is reached.

Handling and Clean-Up

Clean up is best before the adhesive has cured. Cleaners containing NMP (N-methyl pyrrolidone) or Citrus terpene provide the best results. On cured adhesive repeat use may be required.

Storage and Shelf Life

Product should be stored in a cool dry place out of direct sunlight. The shelf life of MP-55420 is one year from date of manufacture. Shelf life is based on the products being stored properly at temperatures between 55°F and 75°F. Exposure to temperatures above 75°F will reduce the shelf life. This product should NEVER BE FROZEN.

Typical Packaging

MP-55420 is conveniently packaged in 50 mL, 490 mL, pail, and drum kits. Special packaging is available upon request.

Specifications and Approvals

UL Certified: Sign Accessories - Component (UYMR2)
File number E350958

Safety and Disposal

For safe handling information on this product, consult the Safety Data Sheet (SDS)

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