Technical Data Sheet

Vibra-TITE® MP-55420

Vibra-TITE® MP-55420 is a high-performance, two-part methacrylate adhesive engineered to bond a wide range of plastics, metals, and composite assemblies. It is extremely durable and offers outstanding bond strength with excellent impact and weathering properties. MP-55420 significantly enhances the reliability of finished assemblies by offering exceptional flexibility, superior resistance to extreme temperature fluctuations, durability through thermal cycling, and robust protection against a wide range of chemicals and environmental conditions. It offers exceptional bonding to a wide range of substrates. MP-55420 is an extremely versatile and high performing product that meets the needs of most applications.

Technology / Base	Modified Acrylic
Type of Product	Structural Adhesive
Components	Two-component
Appearance / Color	Off White or Amber
Consistency	Viscous Liquid
Curing	Room Temperature Cure

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

Technical Data

Rheology	Value	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

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.

Application 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.

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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