

## Technical Data Sheet

### MP-55305

MP-55305 is a high-performance two-part structural methacrylate adhesive designed for bonding a wide range of materials, from plastics and metals to composite assemblies. It delivers exceptional strength and stiffness making it ideal for metal bonding. MP-55305 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	Amber or Green
Consistency	Viscous Liquid

#### Features and Benefits

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

#### Technical Data

<b>Rheology</b>		<b>Condition/Method</b>
Viscosity - Resin	60,000 - 80,000 cPs	Brookfield RV7, 20 RPM, 25°C
Viscosity - Activator	60,000 - 120,000 cPs	Brookfield RV7, 20 RPM, 25°C
Thixotropic Index	5	Brookfield RV7, 20/2 RPM, 25°C
<b>Density</b>		
Mixed Density	0.98 g/cc	
<b>Mix Ratio</b>		
Volume Mix Ratio	1:1	
Weight Mix Ratio	1:1	
<b>Uncured Material Characteristics</b>		
Flash Point	51°F	
Open Time	2 - 3 Minutes	
Fixture Time	5 - 8 Minutes	
Cure Time	24 hr	25°C
<b>Cured Mechanical Properties</b>		
Gap Fill Dimension	0.125 inch	
Hardness	75 Shore D	ASTM D2240
Tensile Strength	3625 to 5075 psi (25 to 35 MPa)	ASTM D638
Over Lap Shear Strength (Average)		
Carbon Steel	3300 psi	ASTM D1002, 25°C 50% RH
Aluminum	3100 psi	ASTM D1002, 25°C 50% RH
<b>Cured Thermal Properties</b>		
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-55305 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-55305 is conveniently packaged in 50 mL, 400 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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