MP54420

MP 54420 is a two part epoxy hybrid adhesive designed for bonding metals and plastics. It cures quickly at room temperature to a tough, semi-rigid material. It has good wetting to most surfaces and has controlled flow characteristics to give good wetting without excessive running or dripping. This product gives very good vibration and impact resistance. It gives good resistance to water spray, inorganic acids and bases and most organic solvents. It was especially formulated to a 2A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. MP 54420 will reach handle cure at room temperature within 6 – 12 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65°C to 30 minutes at 100°C are typical for most applications. Time to heat substrate must be taken into account. Cooler temperatures will also extend work time and increase cure times.

Technology / Base	Epoxy
Type of Product	Structural Adhesive
Components	Two Component
Curing	Room Temperature (secondary thermal cure)
Appearance / Color	Off White
Consistency	Liquid

Features and Benefits

- Excellent Adhesion Properties
- Excellent Bonding to Metals, Ceramics and Most Plastics
- Excellent Chemical Resistance
- Suitable for Cartridge and MMD Dispensing Equipment
- Excellent Thermal Performance
- 100% Reactive
- Room Temperature Cure
- 2:1 volume mix product for easy meter or static mix of application

Technical Data

Rheology	**Value**	**Condition/Method**	
Viscosity - Part A	40,000 cPs	at 25°C	
Viscosity - Part B	30,000 cPs	at 25°C	
Viscosity - Mixed	35,000 cPs	at 25°C	
Uncured Material Characteristics			
Specific Gravity - Part A	1.15		
Specific Gravity - Part B	1.04		
Specific Gravity - Mix	1.12		
Volume Mix Ratio	2 to 1		
Weight Mix Ratio	225 to 100		
Pot Life	20 min	at 25°C	50 gram
Gel Time			50 gram
Handling Time			
Full Cure @ 23°C	24 hours		
Full Cure @ 66°C	2 hours		
Shelf Life	12 months unopened		
Cured Mechanical Properties			
Hardness	78 Shore D	ASTM D2240	
Tensile Strength	62.1 MPa (9000 psi)	ASTM D638	
Elongation at Break	2.8%	ASTM D638	
Overlap Shear Strength			
Aluminum, Acid Etched at 25°C	31.0 MPa (4500 psi)	ASTM D1002, 25°C 50% RH	
Operating Temperature	-60°C to 150°C (-75°F to 300°F)		
Cured Electrical Properties			
Dielectric Constant	4.5 at 25°C, 100Hz	ASTM D150	
Dielectric Strength	17.3 kV/mm	ASTM D149	
Volume Resistivity	8 E 14 ohm·cm	ASTM D257	

General Instructions

Surfaces to be bonded must be clean, dry and free of other contaminants. Bring both components to room temperature prior to mixing. Measure out specified amounts of parts A and B and stir (without introducing bubbles) until homogenous or use a static mixing nozzle. Apply the uniform mixture to both surfaces keeping a thin bond line. Allow to cure while being held in place with light clamping.

Specifications and Approvals

Handling and Clean-Up

See SDS for handling and clean-up information.

Storage

Product should be stored in a cool dry place out of direct sunlight. The shelf life is from date of manufacture. Shelf life is based on the products being stored properly at temperatures between 12°C and 25°C. Exposure to temperatures above 25°C will reduce the shelf life. This product should not be frozen.

Use Note

Safety and Disposal

See SDS for

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