48173/58173

48173/58173 is an extra fast setting, two–component, room temperature curing epoxy adhesive. The system will cure at as low as –18 °C (0 °F). It has a convenient mix ratio, excellent cohesive strength and bonds to most substrates including metal, wood, concrete, ceramics and many plastics. It is recommended for fast patching, fixturing and other repairs requiring quick handling strength. Two slower setting versions of this system are also available; 58185 which sets in approximately 10 minutes, and 58269 which sets in approximately 20 minutes. This Extra-Fast Setting Epoxy is an excellent, general-purpose adhesive. It is recommended for the following substrates: Metals, Carbon Steel, Stainless Steel, Aluminum, Plastics, Epoxy, Stone, Wood, Glass, China, and Leather.
48173/58173 is available in the unique DOUBLE/BUBBLE® job sized package as reorder no. 04001.

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

Features and Benefits

- Room temperature cure
- Extra fast setting
- Excellent cohesive strength

Technical Data

Rheology	**Value**	**Condition/Method**	
Viscosity - Part A	55,000 cPs	at 25°C	
Viscosity - Part B	10,000 cPs	at 25°C	
Viscosity - Mixed	40,000 cPs	at 25°C	
Uncured Material Characteristics			
Specific Gravity - Part A	1.2		
Specific Gravity - Part B	1.13		
Specific Gravity - Mix	1.16		
Volume Mix Ratio	100 to 100		
Weight Mix Ratio	100 to 94		
Gel Time	3 to 5 min	at 25°C	4 gram
Handling Time	15 to 30 min		
Full Cure @ 23°C	24 hours		
Shelf Life	24 months unopened		
Mechanical Properties During Cure			
Overlap Shear Strength			
15 min at 25°C	150 psi	Aluminum, Acid Etched at 25°C	
30 min at 25°C	1000 psi	Aluminum, Acid Etched at 25°C	
60 min at 25°C	1500 psi	Aluminum, Acid Etched at 25°C	

Technical Data

Cured Mechanical Properties	Value	Condition/Method
Hardness	80 Shore D	ASTM D2240
Tensile Strength	7,250 psi	ASTM D638
Elongation at Break	8.5%	ASTM D638
Overlap Shear Strength		
Aluminum, Acid Etched at 25°C	3000 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at -40°C	1695 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 38°C	2400 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 66°C	1100 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 82°C	655 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 93°C	300 psi	ASTM D1002, 25°C 50% RH
Aluminum, Acid Etched at 149°C	245 psi	ASTM D1002, 25°C 50% RH
T-Peel Strength		
T-Peel Strength at 25°C	1.8 pli	Acid etched Al-Al
T-Peel Strength at -40°C	1.5 pli	Acid etched Al-Al
T-Peel Strength at 82°C	2.5 pli	Acid etched Al-Al
Operating Temperature	82°C (180°F)	

General Instructions

Fast-Setting Epoxy can be used to repair tools, auto parts, electrical and electronic components, furniture and other applications that require a fast-setting adhesive. Surface must be clean and dry before application. Remove all chemicals, dirt, wax and oil. To obtain the best cured properties, accurate proportioning and thorough mixing are essential.

Specifications and Approvals

Handling and Clean-Up

See SDS for handling and clean-up information.

Storage

These materials should be stored in a dry environment within a temperature range of 16 °C to 27 °C (60 °F to 80 °F). Extremes of temperature beyond this range may result in crystallization or polymerization of the materials. Introduction of a nitrogen blanket into the containers before closing will improve the storage life of the products and reduce the possible color change due to moisture contamination.

Safety and Disposal

See SDS for

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