

MAX BOND MEDIUM VISCOSITY A/B

Epoxy Resin System

- Non-Critical Mix Ratio, Equal Parts by Volume, Brush, Roller Coat, Trowel Applied
 - Bonds Steel, Aluminum, Soft Metals, Concrete, Ceramic, Fiberglass, Composites
 - Excellent Impact Resistance, Excellent Balance of Strength and Flexibility
 - Excellent Water/Salt Water Resistant for Marine/Aero Applications
 - Low Shrinkage, Wide range of service temperature
 - Conforms To Aerospace /Military/Naval Specifications
- MIL-A-8623 T1, MS-511, MMM-134 T1 and T2, OS-9923A, Boeing BMS-5-29

DESCRIPTION

MAX BOND A/B MEDIUM VISCOSITY is a two-part epoxy based adhesive system especially formulated to provide structural bond strength to a variety of substrates. Its long pot life, exceptional mechanical properties, and easy application make MAX BOND A/B MEDIUM VISCOSITY an ideal general-purpose adhesive system.

MAX BOND A/B MEDIUM VISCOSITY is 100 % solids and does not contain Ozone Depleting Chemicals (ODC). MAX BOND A/B MEDIUM VISCOSITY will cure even in humid and low temperature conditions. It is generally room temperature cured but can be snap cured at elevated temperatures for a short period of time.

MAX BOND A/B MEDIUM VISCOSITY demonstrates structural bond strengths to a variety of substrates commonly used in composites industry such as, steel, aluminum and soft metals, fiberglass, concrete and ceramic and most plastics.

MAX BOND A/B MEDIUM VISCOSITY performs well in wide range of service temperature and resists cracking and delamination due to cyclic vibration, thermal expansion and contraction.

APPLICATION and USAGE

MAX BOND A/B MEDIUM VISCOSITY is self-leveling and easily poured into place and is well suited for mixed meter-dispensing equipment or mix and pour techniques. Large mixes of up to 300 grams are possible without generating excessive exothermic temperatures.

The working time is approximately 90 minutes for a 100-gram total mass and less if mixed in large volumes.

Mixing Instructions

Dispense equal parts of Part A and Part B and mix thoroughly until a homogenous consistency is achieved. The mixture will turn translucent milky amber but will clarify when applied in a thin film during curing.

For mix metering application, ensure that an equal flow rate of Part A and Part B is achieved. A 24 element static mixer provides excellent mix results. Attach the static mixer and dispense and discard approximately 1-ounce material before using the material. Dispense the material in on corner of the component casing and allow the material to completely flow through out. This technique will reduce voids and air entrapment.

For Bonding applications

To insure a strong bond, items or substrates to be bonded must be clean and free from contaminants such dust, grease, oils and other foreign materials. Please refer to our Surface Preparation Bulletin for suggested surface cleaning method And Proper Bonding Techniques. Apply via brush or roller coat properly mixed resin on both substrates and clamp or apply adequate pressure so that a thin bondline is achieved, approximately .003 to .007 inch minimum bond line thickness. Allow to cure overnight.

For Encapsulating Electronic Parts

Premix the Part A and Part B into a container and then pour the mixed component into another clean container and mix for another minute. This will insure a thoroughly mixed resin is achieved. Pre arrange the wire leads to the desired position and secure. Pour the mixed MAX BOND into the component housing to be encapsulated insuring complete and level coverage. Pour or dispense only from one corner of the component casing and allow the material to completely flow and fill through out the casing. This technique will reduce voids and air entrapment.

For Laminating or reinforcing with Fiber Fabric Materials.

MAX BOND works well as a laminating resin for composite fabrics such as canvas, fiberglass, carbon fiber, Aramid fiber and other hybrid and synthetic fabrics. Apply a thin layer of the mixed MAX BOND unto the pre-cleaned substrate to be reinforced. Apply a layer of fiberglass and aide the resin to wet-out the fiberglass using a brush and apply subsequent layers of fabric sandwiching a layer of resin until the desire thickness is achieved. Use a rubber squeegee to remove excess resin. Allow curing for 24 hours. If using a vacuum bag technique or a platen press, please review our "Lay-up sequence for bagging operations" bulletin.

For Use as a Concrete or Wood Penetrating or as a Water Sealant

Mix equal parts of Part A and Part B in a clean container and thin with acetone or MEK (about 90 parts resin to 10 parts solvent). Apply on cleaned and dried wood or concrete in thin coats using a roller coater or bristle brush. Work in small areas and with good ventilation. Acetone or MEK is highly flammable solvent. Remove all ignition sources before application. Allow to cure for 36 hours.

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Industrial Strength Epoxy Resin System

PHYSICAL PROPERTIES

Density (Mixed)	1.10 gm/cc
Foam and Color	Part A – Clear Liquid Part B – Hardener: Tan Liquid
Viscosity Mixed	25,624 cPs @ 77°F (25°C) Mixed
Mix Ratio	Equal parts by weight or by volume
Working Time	85 Minutes @ 77°F (25°C) (200 gm mass)
Peak Exotherm	120°F 300 gram mass
Cure Time	24 Hrs. Minimum or 2 Hrs. @ room temperature plus 120 min. @ 212°F (100°C)

MECHANICAL PROPERTIES

Hardness	85 ± 5 Shore D
Tee-Peel Strength (Standard)	4 Lbs. per inch Width Aluminum to Aluminum
Compressive Strength	15,800 psi @ 77°F (25°C)
Tensile Shear Strength	3,700 psi @ 77°F (25°C) 2,200 psi @ -112°F (-80°C) 1450 psi @ 212°F (100°C)
Elongation	2.3% Maximum Yield
Tensile Strength	8,800 psi
Service Temperature	-67°F to 250°F

ELECTRICAL PROPERTIES

Volume Resistivity	2.7 x 10 ¹² Ohms-cm (Ω-cm)
Dielectric Strength	510 Volts/Mil @ 60 Hz.
Dielectric Constant	3.23 @ 60 Hz

ENVIRONMENTAL TEST

Salt Spray	100°F (38°C), 200 Hrs.	NO EFFECT
Impact	500 gram ball dropped at height of 24 inches	NO DAMAGE

CHEMICAL RESISTANCE TEST – 10 Day Soak Test @ 77°F (25°C)

	WEIGHT CHANGE, %
Distilled Water	1.23
Sulfuric Acid 30%	1.9
Nitric Acid	3.8
Toluene	3.7
NaOH	10.00
Anti-Freeze	No Effect
Motor Oil soak	No Effect

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PACKAGING AND STORAGE

MAX BOND A/B MEDIUM VISCOSITY is available in 5 gallon and 55 gallon Kits. Use size kits and special packaging requests are also available.

Stir MAX BOND A/B MEDIUM VISCOSITY in their respective shipping container to insure uniform dispersion of filler before dispensing. The use power mixing equipment is recommended to achieve uniform dispersion of filler.

MAX BOND A/B MEDIUM VISCOSITY should be stored in a cool dry place. DO NOT store above 30°C for prolonged period.

MAX BOND A/B MEDIUM VISCOSIT is warranted for 12 months from the date of shipment.

SAFETY NOTE

This product is for industrial use only. Please review all precautions before using this product. As with all products of the same nature, avoid prolonged inhalation and repeated skin contact. Always wear safety goggles and impervious rubber gloves when handling this material. Large mass curing of this product is not recommended for it may produce noxious fumes.

IMPORTANT NOTICE

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