

## MAX CLR A/B Clear Liquid Resin

### DESCRIPTION

**MAX CLR A/B** is a two-part epoxy based system especially formulated to provide structural bond strength to a variety of substrate materials. Its ease of use and superior mechanical performance make MAX CLR A/B an ideal specialty epoxy resin system. Its non-blushing characteristic allows MAX CLR to be an excellent choice for composite fabric lamination and as a decoupage, counter top or plaque coating. MAX CLR A/B can also be used as a clear casting resin and also as an adhesive for applications that require exceptional resin clarity.

MAX CLR A/B demonstrates exceptional chemical resistant properties making it an excellent protective floor coating for concrete and similar stone substrates.

MAX CLR A/B performs well in bonding a variety of substrates such as composite materials, concrete and ceramic products, plastics, wood, glass, steel, aluminum and most soft metals.

MAX CLR A/B is 100% solids and does not contain Ozone Depleting Chemicals (ODC), non-reactive plasticizers or solvent fillers.

MAX CLR A/B performs well in a wide range of service temperature. It demonstrates low exothermic reaction and a very little shrinkage during and after cure.

MAX CLR A/B is tough, resilient and physical impact resistant adhesive/coating capable of curing in high humidity and or low temperature.

MAX CLR A/B is generally room temperature cured but can be snap-cured at elevated temperatures for a short period of time.

Because of its low viscosity, MAX CLR A/B can be used as a moisture coating or as a laminating adhesive. It maintains its clarity even after prolonged exposure to heat and/or harsh environment. MAX CLR A/B has an excellent electrical insulating property making it an exceptional choice for fast field repair for electronic applications.

MAX CLR A/B does not contain ionic compounds that could promote oxidation in circuit board repair applications.

MAX CLR A/B resists extreme and repeated thermal shocks making it well suited for bonding substrates with dissimilar expansion coefficients.

### APPLICATION and USAGE

Precaution: As with industrial chemicals of the same nature, avoid direct skin contact by using protective gloves and eyewear. Always practice safety first.

**Determine the amount needed and weigh out two parts "Part A" to one part "Part B" by weight or by volume in to a clean container. Mix using a spatula or a low speed mixer. To avoid excess air entrapment mix gently and scrape the sides and bottom of the container to insure complete mixing. Clean with Acetone or MEK before the mixed resin cures hard.**

#### To use MAX CLR as decoupage coating, tabletop or plaque coating:

- A. Prepare the surface to be sealed by cleaning with a tack rag to remove loose and other surface contaminants.
- B. If imbedding pictures or other items onto the tabletop, plaques or a decoupage projects, secure the items using MAX CLR as an adhesive and allow to set-up before coating.
- C. Pour the mixed MAX CLR into another container and mix for another minute (this insures that no tacky spots caused by unmixed material will be applied) and pour or brush or foam roller (use foam roller for a lint free application) coat apply unto the substrate to be sealed. Allow the coating to flow out evenly and protect the surface from airborne dust and debris until it has set-up. If a thicker coating is desired, allow to set-up for at least 6 hours before applying subsequent coats. To remove stubborn surface bubbles, pass a flame from a propane torch over the surface very, very quickly and the bubbles will pop. Blowing at the bubbles with a straw will also work in removing air bubbles.
- D. Allow the completed coating to cure for at least 24 hours before handling.
- E. Optional step for a supper high gloss finish: Upon full cure of the coating, lightly wet sand the surface using a 1800 grit then an a 2000 grit polishing sand paper or rubbing compound and apply durable car polish.

### MAX CLR A/B

#### Clear Laminating Resin

**To use Max CLR HP A/B as a laminating or impregnating resin for fiberglass or other composite fabrics:**

Precaution: As with industrial chemicals of the same nature, avoid direct skin contact by using protective gloves and eyewear. Always practice safety first.

A good rule of thumb for preparing high performance laminate is a balance fabric to resin ratio. The proper ratio for fiberglass fabric is 33% resin weight to 67% fiberglass fabric by weight. Please review our Vacuum Bagging Bulletin for suggested vacuum bagging lay-up profile. This profile can also be used in press platen technique.

- A. Precut or measure out the correct shape, length or pattern and the number of layers of fabric needed to achieve the desired thickness. Impregnate the fiberglass with mixed MAX CLR to the optimum resin content and use platen press pressure or vacuum bag technique to consolidate the layers together and apply compression force. This will also remove any air pockets in the laminate.
- B. Clean the surface to be reinforced or laminated. Please refer to our Surface Preparation bulletin if laminate is used as reinforcement. Apply a thin layer of the mixed MAX CLR unto the item to be reinforced. Apply a layer of fiberglass and aide the resin to wet-out the fiber glass using a brush or roller 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 and to apply compressive pressure to consolidate the layers of fiberglass together. Allow curing for 24 hours. Clean up excess resin run off before it has a chance to set-up using rag dampened with acetone or MEK.
- C. Allow curing at room temperature for 24 to 36 hours.

**To use MAX CLR as a molding resin.**

- A. Clean the mold and apply a good quality release agent such as wax mold release or PVA mold release.
- B. Slowly pour the mixed MAX CLR into the mold cavity, allowing the entrapped air bubbles to rise to the surface.
- C. Allow curing at room temperature for 24 to 36 hours.
- D. De-mold the cured part.

**To use MAX CLR as an electrical potting resin.**

- A. Place the circuit board in the container or housing and secure all wiring leads to its desired position.
- B. Pour the mixed MAX CLR into the cavity
- C. Allow to set-up for at least 4 hours before handling

#### PHYSICAL PROPERTIES

Density	1.10 G/CC
Foam and Color	Clear Liquid
Viscosity	800 – 1,200 cPs @ 25°C Mixed
Mix Ratio	50 Parts "B" to 100 Parts "A" By Weight
Working Time	70 Minutes @ 25°C (100 gm mass)
Peak Exotherm	70°C (100 gram mass)
Handle Time	7.5 Hours
Full Cure Time	36-48 Hrs. Minimum @ 25°C

#### MECHANICAL PROPERTIES

Hardness	72 ± 5 Shore D, 2H Pencil Hardness
Tee-Peel Strength	5.7 Lbs. per inch Width
Tensile Strength	6,100 psi
Tensile Shear Strength	1,300 psi @ 25°C 800 psi @ -80°C 550 psi @ 100°C
Flexural Strength	10,100 psi
Elongation	7.0% @ 25°C
Compressive Strength	9,200 psi
Compressive Modulus	312 kpsi
Heat Distortion Temp.	80°C

#### ELECTRICAL PROPERTIES

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

## MAX CLR A/B

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### PACKAGING AND STORAGE

MAX CLR A/B is available in pints, quarts, gallon, 5 gallon and 55 gallon Kits. Use size kits and special packaging requests are also available. MAX CLR A/B should be stored in a cool dry place. DO NOT store above 30°C for prolonged period. MAX CLR A/B is warranted for six months from the date of shipment.

### SAFETY NOTE

#### EU RoHS 2:

This material does not contain any hazardous substances as determined by the European (RoHS)

RoHS Substances/Compounds	Weight (mg)	PPM
Cadmium and Cadmium Compounds	0	<100
Hexavalent Chromium and Compounds	0	<1000
Lead and Lead Compounds	0	<1000
Mercury and Mercury Compounds	0	<1000
Polybrominated Biphenyls (PBB)	0	<1000
Polybrominated Diphenylethers (PBDE)	0	<1000

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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