TECHNICAL DATA SHEET

ALUM-CU BOND

PRODUCT: H-480 1LB (454 grams) Aluminum Filled Polymer Compound

DESCRIPTION: A two-component, room temperature cured, polymer formulation, highly concentrated with carefully selected pure aluminum particles, modified curing agents and high quality additives to provide maximum Strength, Adhesion, Durability and Ease of application.

APPLICATIONS:
ALUM-CU BOND is especially formulated for making difficult to braze or weld Copper – Aluminium joint in HVAC application. The room temperature cured, 1:1 mixing ratio of resin & hardener by volume ensures easy of application for operator & the mixed compound viscous paste can be easily applied on joint area by brush or spatula.
ALUM CU BOND adheres soundly to almost every base material such as Copper, Aluminum, Steel, etc.
ALUM CU BOND has a long shelf life > 2 years and does not need freezing temperature storage.
The cured deposit is unaffected by water, oil, refrigerant gas and gasoline and is free from Sodium, Potassium, Silicates, Carbolic Aids, Paraffinic Wax, Fluorine etc.
ALUM-CU BOND can be machined, sanded, drilled and tapped and is also commonly used for the repair of refrigerant gas leaks from punctured copper and aluminum coils.
ALUM-CU BOND is formulated and designed for the strong repair of HVAC pipes, tanks, valves, pumps, castings, water jackets, radiators, etc., where a non-rusting, non-magnetic aluminum finish is desired.

PHYSICAL PROPERTIES:	
Color	Grey
Pot Life 1 lb. @ 24ºC (75ºF)	55 minutes
Viscosity	Non-sagging Paste
Mixed Viscosity	330,000 cps
Cure Shrinkage	0.0005 in/in
Temperature Resistance	250ºF (121ºC)
Hardness (Shore, ASTM D 1706)	83D
Cured Density	17.5 cu. in. per lb.
Coefficient of Thermal Expansion	40 X 10^{-6} cm/cm/ºC
Maximum Gap Fill (mm)	5
Compression Strength (ASTM D 695)	8,600 psi (59 M Pa)
Tensile Strength (ASTM D 638)	6,100 psi (42 M Pa)
Adhesive Tensile Shear (ASTM D 1002)	4,600 psi (32 M Pa)

CHEMICAL RESISTANCE:	
Hydrochloric Acid 10%	Very Good
Hydrochloric Acid 50%	Good
Sulfuric Acid 10%	Very Good
Sulfuric Acid 50%	Good
Water	Very Good
Ammonia	Very Good
Sodium Hydroxide 10%	Very Good
Gasoline, Oil, Kerosene	Very Good
Refrigerant Gas	Very Good
Mineral Spirits	Very Good
Toluene	Fair
Methanol	Fair
MEK	Fair
Propylene Glycol	Very Good

DIRECTIONS: Surface area to be repaired must be clean, dry and preferably roughened for maximum adhesion.
Combine all of the hardener with all of the resin in the resin container. For smaller portions, dole out 1 part hardener to 1 part resin by volume.

Mix thoroughly for 3 minutes making certain that all of the hardener comes in contact with all of the resin while scraping the sides and bottom of the container.
Apply the mixed compound with a brush, putty knife, spatula, or similar tool. The tool may be moistened with water to provide a smooth finish to the HY-POXY.

CURING TIME: At 75℉ (24℃) a ½" (12.5mm) layer of HY-POXY ALUM-CU BOND will be hard in approximately 45 minutes. FULL cure times are as follows:

TEMPERATURE	WORKING TIME	FULL CURE TIME
60℉ (16℃)	**90 Minutes**	**32 Hours**
75℉ (24℃)	**45 Minutes**	**16 Hours**
90℉ (32℃)	**25 Minutes**	**8 Hours**

HY-POXY ALUM-CU BOND will not cure properly below 40℉ (4℃).

NON-WARRANTY: We cannot accept any responsibility or liability for lack of results because the storage, handling and application of the compound are beyond our control.

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