

TRA-DUCT 2902

ROOM TEMPERATURE CONDUCTIVE SILVER EPOXY ADHESIVE

TRA-DUCT 2902 is an electrically conducting silver-filled epoxy compound recommended for electronic bonding and sealing applications that require a combination of good mechanical and electrical properties. This two-part, smooth paste formulation of refined pure silver and epoxy is free of solvents and copper or carbon additives. It develops strong, durable, electrically and thermally conducting bonds and coatings between many different and dissimilar materials such as metals, ceramics, glass and plastic laminates. TRA-DUCT 2902 cures at room temperature and can be used as a cold solder for heat-sensitive components where hot-soldering is impractical. It also can be used for the assembly and repair of electrical modules, printed circuits, wave guides, flat cables and high frequency shields. This adhesive complies with the requirements of NASA's Outgassing Specification.

PROPERTY		TYPICAL VALUES
Color		Silver
Specific gravity, mixed		3.200
Viscosity, cps, mixed	cp# 52 @ 10 rpm	20,000
Operating temperature range, °C		-60 to 110
Hardness, Shore D		80
Mix ratio, parts by weight, Resin/Hardener		100/6
Thermal conductivity, W/M ² /K		2.99E+00
Lap shear, alum to alum, psi	1 hour @ 110°C	1,600
	15 minutes @ 150°C	1,600
	2 hours @ 65°C	1,000
	24 hours @ 25°C	700
Glass transition (T _g), °C, ultimate	24 hours @ 25°C	52.00
Coefficient of expansion, cm/cm/°C		4.90E-05
Volume resistivity, ohm-cm @ 25°C	1 hour @ 110°C	6.00E-04
	15 min @ 150°C	5.00E-04
	2 hours @ 65°C	9.00E-04
	24 hours @ 25°C	1.00E-03
	5 min @ 160°C	3.00E-04
Outgassing, NASA		Passes
Outgassing, NASA, %CVCM		0.050
Cytotoxicity study	ISO (10993-5) elution method	Passes

POT LIFE 60 minutes

CURE SCHEDULE

24 hours @ 25°C or
1 to 4 hours @ 65°C

APPLICATION DIRECTIONS

- (1) Carefully clean and dry all surfaces to be bonded.
- (2) Remove clamp and thoroughly mix the TRA-BOND 2902 epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout.
- (3) Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds -- however maintain contact until adhesive is completely cured.

AVAILABILITY

Please contact TRA-CON's technical service department at 800-TRA-CON1 for packaging options for this material that will best suit your process.

EXPIRATION DATE

TRA-CON resin products are marked with an expiration date at the time of manufacture which is similar to the the dating system used for most perishable materials such as foodstuffs, photographic films, pharmaceuticals and most reactive products. This date is marked "Use Before" which indicates that the product will yield its best properties when mixed and cured before the date shown. The expiration date should be monitored to ensure that inventory levels are replenished in adequate time to avoid unnecessary interruptions in the manufacturing process.

STORAGE AND HANDLING CONDITIONS

The expiration date is based upon dry storage conditions at or below 80°F (27°C) in the original, sealed and unopened containers for BIPAX, TRA-PAX and bulk packaged materials. The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package. Contents may separate during storage. Resin or hardener in bulk containers (e.g. quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

Contents may settle either during storage or during the curing cycle, therefore complete mixing of the individual resin and hardener components prior to combining them is recommended to obtain all the benefits of the properties designed in the formulation

Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. Merely returning the product back to room temperature will not always redissolve the crystals and a gentle warming cycle of 125°F for 30 minutes prior to mixing the resin and hardener components may be necessary to return the product to its best condition. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results.

WARNING: THIS MATERIAL IS SOLD FOR INDUSTRIAL USE ONLY

Uncured epoxy adhesives - consisting of resin and hardener components - may cause dermatitis, skin sensitization or other allergic responses. Prevent all contact with skin and eyes. If contact occurs, flush immediately with plenty of water (get prompt medical attention for eyes). Keep away from heat and open flame. KEEP OUT OF REACH OF CHILDREN. Immediately clean up any spills that may occur.

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The properties given are TYPICAL VALUES and are not intended for use in preparing specifications. Users should make their own tests to determine the suitability of this product for their own purposes.