

TRA-CAST 3103

GENERAL PURPOSE EPOXY CASTING COMPOUND

TRA-CAST 3103 is a low viscosity two-part formulation recommended for general purpose electrical potting and encapsulating application where the combination of good mechanical thermal and electrical properties are required. It is an all liquid system with excellent flow and wetting characteristics, exhibits superior adhesion to glass, ceramics most metals, many plastics (includes potting shells) and other electronic materials, contains no solvents, and is easily mixed, handled and cured with minimum shrinkage at room temperatures. The fully cured TRA-CAST 3103 is an electrical insulator with good impact and thermal shock resistance. It is further resistant to water, weather, gases, galvanic action, petroleum fuels and solvents, alcohol, salts and many acids and alkalis.

PROPERTY		TYPICAL VALUES
Color		Black
Specific gravity, mixed		1.580
Viscosity, cps, mixed	(after mixing) @ 25°C	4,000
Thixotropic index	(5 rpm/50 rpm)	1.3
Operating temperature range, °C		-60 to 145
Hardness, Shore D		85
Mix ratio, pbw, Resin/Hardener		100/10.5
Thermal conductivity, W/M °K		5.00E-01
Lap shear, alum to alum, psi	2 hours @ 65°C	2,600
Glass transition (T _g), °C, ultimate		80.00
Coefficient of expansion, cm/cm/°C		3.50E-05
Dielectric strength, volts/mil		510
Dielectric constant	1 KHz @ 25°C	4.10
	100 KHz @ 25°C	3.80
Dissipation factor	1 KHz @ 25°C	0.010
	100 KHz @ 25°C	0.010
Volume resistivity, ohm-cm @ 25°C		4.00E+16
Volume resistivity, ohm-cm @ 100°C		4.00E+14
Reactive solids contents, %		100
Outgassing, NASA		Passes
Heat distortion temperature, °C		102
Cytotoxicity study	ISO (10993-5) elution method	Passes

POT LIFE 30 minutes

CURE SCHEDULE

24 hours @ 25°C or
4 hours @ 65°C

APPLICATION DIRECTIONS

- (1) Apply mold release to mold walls if casting is to be removed after cure.
- (2) Carefully clean and dry all surfaces to be bonded.
- (3) Remove clamp and thoroughly mix the TRA-CAST 3103 casting epoxy system components in the handy BIPAX mixing-dispenser package until color is uniform throughout.
- (4) Pour the completely mixed epoxy system into the mold and then cure. A vacuum deairing step for 10 minutes immediately after pouring -- but prior to curing -- may be used to remove entrapped air for void-free castings.

STORAGE AND HANDLING CONDITIONS

The expiration date is based upon dry storage conditions at or below 80°F (27°C), unless specified otherwise on the packaging, 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.

**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.**

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