

Technical Bulletin # 3044

Product Description

INSULCAST 3230 LV is a low viscosity, highly filled epoxy formulation which, in addition to having excellent electrical properties, has unusually high thermal conductivity with low thermal expansion. Similar to **INSULCAST 140** but lower viscosity. This system meets the NASA outgassing specifications with tolerances for TML ranging from 0.40 to 0.41% and for CVCM ranging from 0.0 to 0.1%.

Properties Uncured

	INSULCAST 3230 LV	INSULCURE 9	INSULCURE 11B	
COLOR, VISUAL:	Black	Amber	Amber	
VISCOSITY @ 25°C, cps:	18,000	55	700	ASTM D 2393
SPECIFIC GRAVITY:	2.1	0.97	0.95	
MIX RATIO (by wt.):	100	:4-5	:5-7	
MIXED VISCOSITY, cps:		6,000	12,000	ASTM D 2393
SHELF LIFE @ 25°C, months:	12	12	12	
POT LIFE (100 gr.) @ 25°C, mins:		75-120	150-180	

Properties Cured**PHYSICAL**

HARDNESS, DUROMETER (Shore D):	90	92	ASTM D 2240
TENSILE STRENGTH, psi:	8,000	8,500	ASTM D 638
TENSILE ELONGATION, %:	1.0	1.0	ASTM D 638
COMPRESSIVE STRENGTH, psi:	16,500	18,000	ASTM D 790
FLEXURAL STRENGTH, psi:	13,000	13,500	ASTM D 790
COEFFICIENT OF THERMAL EXPANSION, °C:	28 x 10 ⁻⁶	28 x 10 ⁻⁶	
THERMAL CONDUCTIVITY, BTU-in/(ft ²)(hr)(°F):	9	9	
HEAT DISTORTION POINT, °C:	80	150	
SERVICE TEMPERATURE, °C:	105	155	

Electrical

DIELECTRIC STRENGTH, volts/mil:	475	500	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz:	6.3	6.5	ASTM D 150
DISSIPATION FACTOR, 1 KHz:	0.02	0.02	ASTM D 150
VOLUME RESISTIVITY, ohm-cm:	1.3 x 10 ¹⁶	5 x 10 ¹⁶	ASTM D 257

Use Instructions

1. Pre-mix **INSULCAST 3230 LV** in original container before use to ensure that any settled filler is re-incorporated.
2. Weigh out the required amount of **INSULCAST 3230 LV**. Weigh out required amount of curing agent (see mix ratio).
3. Mix thoroughly, being certain to scrape sides and bottom of container.
4. De-air at 29 in. Hg for 10-15 minutes.
5. Pour into mold or cavity.

Cure Schedule

Insulcure 9: 16 to 24 hours at room temperature (25°C), or 2 hours at 65°C.

Insulcure 11B: 2 hours at 100°C plus 2 hours at 125°C.
2 hours @ 120°C or 24 hours @ 75°C

Storage Requirements

This product may settle upon shipment or storage. The product should be re-mixed well prior to use. Store material in a cool dry place.

Date 08/2006

IMPORTANT:

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HEALTH CAUTION:

Avoid breathing possible fumes, mists and vapors which can cause severe respiratory damage. Use of NIOSH approved breathing apparatus is required for more than minimal exposure. Always work in areas with adequate ventilation to allow dissipation of polyamine and other chemical fumes, and where applicable, solvent fumes. Use of goggles, protective garments, rubber gloves, protective cream is required. If material gets into eyes, flush thoroughly with clean water for twenty (20) minutes; then seek medical treatment. Avoid skin contact. Material can cause contact dermatitis. Always wash exposed areas immediately, using warm water and soap, followed by rinsing with clean water. Observe all safety precautions. It is important when using solvent based materials or solvents to keep away from open flame or ignition source.

PLEASE REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER FIRST AID INFORMATION. FOR CHEMICAL EMERGENCY, CALL CHEMTREC (DAY OR NIGHT) 800 424-9300.