



## TECHNICAL BULLETIN #3105 – INSULCAST LN 1-05 EPOXY POTTING COMPOUND

Revised: 11/2019

### PRODUCT DESCRIPTION

**INSULCAST LN 1-05** is a non-cracking epoxy compound that was specifically designed for large potting and encapsulation applications. It displays excellent electrical properties over a wide range of temperatures. **INSULCAST LN 1-05** makes use of the latest polymer and filler technology.

### PROPERTIES UNCURED

	PART A	PART B	
COLOR, VISUAL	Black	Neutral	-
VISCOSITY @ 25°C, cps	120,000	10	ASTM D 2393
SPECIFIC GRAVITY	1.62	0.94	-
MIX RATIO (by wt.)	7.2:1		-
MIX RATIO (by volume)	4.15:1		-
MIXED VISCOSITY, cps	5,000		ASTM D 2393
SHELF LIFE @ 25°C, months:	12		-
POT LIFE @ 25°C, hours	8-10		-

## PROPERTIES CURED

PHYSICAL		
HARDNESS, DUROMETER (Shore D)	85	ASTM D 2240
COEFFICIENT OF THERMAL EXPANSION, °C	32x10 <sup>-6</sup>	-
THERMAL CONDUCTIVITY, BTU-in/(ft <sup>2</sup> )(hr)(°F)	4.5	-
THERMAL CONDUCTIVITY, W/m °K	0.648	-
GLASS TRANSITION TEMPERATURE (T <sub>g</sub> ), °C	75 +/- 3	-
SERVICE TEMPERATURE, °C	-40 to +105	-
FLAMMABILITY UL 94V0	Passes	-

## ELECTRICAL

DIELECTRIC STRENGTH, volts/mil	400	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz	5.15	ASTM D 150
DISSIPATION FACTOR, 1 KHz	0.01	ASTM D 150
VOLUME RESISTIVITY, ohm/cm	6x10 <sup>15</sup>	ASTM D 257

## USE INSTRUCTIONS

1. Measure out (by weight) 7.2 parts of Insulcast LN 1-05 Part A for every 1 part of Insulcast LN 1-05 Part B or mix together pre-weighed 5-gallon kits.
2. Mix thoroughly for 3 minutes, scraping the sides and bottom of container.
3. Evacuate @ 29 in. Hg for void-free casting.
4. Pour into unit or cavity. (Ensure that there are no exposed sharp edges. This will prevent any chance for crack propagation.)
5. While not required, pre-warming the resin (Part A only) to approximately 45°C - 50°C is recommended to lower the viscosity, such that the material mixes and pours more easily.

## CURE SCHEDULE

36 hours at 25°C or 16 hours at 25°C followed by 2 hours at 65°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.

## IMPORTANT:

The following supersedes any provision in your company's forms, letters and papers. ITW PERFORMANCE POLYMERS makes NO WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE FOR THIS PRODUCT. No statements or recommendations contained in the product literature are to be construed as inducements to infringe any relevant patent, now or thereafter in existence. UNDER NO CIRCUMSTANCES SHALL ITW PERFORMANCE POLYMERS BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES FROM ALLEGED NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY OR ANY OTHER THEORY, ARISING OUT OF THE USE OR HANDLING OF THIS PRODUCT. The sole liability of ITW PERFORMANCE POLYMERS for any claims arising out of the manufacture, use or sale of its products shall be to refund the buyer's purchase price, provided such products have been demonstrated in ITW PERFORMANCE POLYMERS sole opinion, to justify such refund.

## 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.**

