



TECHNICAL BULLETIN #3053 – INSULCAST 3259D
EPOXY CASTING COMPOUND

Revised: 05/2018

PRODUCT DESCRIPTION

INSULCAST 3259D is a low viscosity, highly filled epoxy formulation which, in addition to having excellent electrical properties, has excellent thermal conductivity with low thermal expansion. It can be cured at room temperature or at elevated temperatures to give cured properties that meet AIEE Class B requirements.

PROPERTIES UNCURED

	Part A	Part B	
COLOR, VISUAL	Black	Amber	-
VISCOSITY@ 25°C, cps	200000	100	ASTM D 2393
SPECIFIC GRAVITY	1.9	1.2	-
MIX RATIO (by wt.)	100:30		-
MIXED VISCOSITY, cps	5000		-
POT LIFE (100g) @ 25°C, hrs	1-2		-
SHELF LIFE @ 25°C, months	12		-

PROPERTIES CURED

PHYSICAL		
HARDNESS, DUROMETER (Shore D)	90	ASTM D 2240
TENSILE STRENGTH, PSI	8,000	ASTM D 638
TENSILE ELONGATION, %	1.0	ASTM D 638
COMPRESSIVE STRENGTH, psi	16,000	ASTM D 790
FLEXURAL STRENGTH, psi	12,500	ASTM D 790
COEFFICIENT OF THERMAL EXPANSION, °C	30x10 ⁻⁶	-
THERMAL CONDUCTIVITY, BTU-ft/(ft ²)(hr)(°F)	7.2	-
THERMAL CONDUCTIVITY, W/m °K	1.03	-
HEAT DISTORTION POINT, °C	150	-
SERVICE TEMPERATURE, °C	155	-

ELECTRICAL

DIELECTRIC STRENGTH, volts/mil	475	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz	6.5	ASTM D 150
DISSIPATION FACTOR, 1 KHz	0.02	ASTM D 150
VOLUME RESISTIVITY, ohm-cm	5x10 ¹⁶	ASTM D 257

MIXING INSTRUCTIONS

1. Warm **INSULCAST 3259D** to 40°-55°C and stir contents thoroughly, before removing any material.
2. Weigh out the required amount of **INSULCAST 3259D**.
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.

CURE SCHEDULE

2 hours at 100°C plus 2 hours at 125°C.

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.