

Technical Bulletin # 3060

## Product Description

**INSULCAST 7283** is a moderate viscosity, self-extinguishing, epoxy potting/casting compound which will cure at room temperature to a semi-rigid, thermoset polymer. It has excellent physical and electrical properties. This product is similar to **INSULCAST 333** with slightly different flame retardants. When used with **INSULCURE 179** provides a blush-free glossy surface.

## Properties Uncured

	<b>INSULCAST 7283</b>	<b>INSULCURE 179</b>	<b>INSULCURE 11B</b>	
COLOR, VISUAL:	Black	Amber	Amber	
VISCOSITY @ 25°C, cps:	13,000	45	700	ASTM D 2393
SPECIFIC GRAVITY:	1.55	0.97	0.95	
MIX RATIO (by wt.):	100	20	8	
MIXED VISCOSITY, cps:		2,000	3,000	ASTM D 2393
POT LIFE (100g.) @ 25°C, hrs:		3-4	2.5	
SHELF LIFE @ 25°C, months:	12	12	12	

## Properties Cured

### PHYSICAL

HARDNESS, DUROMETER (Shore D):	80-85	85	ASTM D 2240
TENSILE STRENGTH, psi:	7,000	12,000	ASTM D 638
TENSILE ELONGATION, %:	3-4	3-4	ASTM D 638
FLEXURAL STRENGTH, psi:	12,500	19,500	ASTM D 790
COMPRESSIVE STRENGTH, psi:	14,000	14,500	ASTM D 695
COEFFICIENT OF THERMAL EXPANSION, °C:	48 x 10 <sup>-6</sup>	48 x 10 <sup>-6</sup>	
FLAMMABILITY RATING U.L.:	Pass	Pass	
THERMAL CONDUCTIVITY, BTU-in/(ft <sup>2</sup> )(hr)(°F):	4.3	4.2	
HEAT DISTORTION POINT, °C:	80	155	
SERVICE TEMPERATURE, °C:	105	155	

## Electrical

DIELECTRIC STRENGTH, volts/mil:	430	430	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz:	4.2	4.5	ASTM D 150
DISSIPATION FACTOR, 1 KHz:	0.03	0.02	ASTM D 150
VOLUME RESISTIVITY, ohm-cm:	1 x 10 <sup>15</sup>	1 x 10 <sup>15</sup>	ASTM D 257

## Use Instructions

1. Premix **INSULCAST 7283** in original container being certain to reincorporate any fillers that may have settled.
2. Weigh out required amount of **INSULCAST 7283**.
3. Weigh into **INSULCAST 7283**, the proper amount of curing agent according to the ratios indicated.
4. Mix thoroughly, being careful to scrape sides and bottom of container to ensure proper blending.
5. Evacuate for 2-5 minutes if void-free castings are required.
6. Pour into cavity or mold.

## Cure Schedule

**Insulcure 179:** 24 hours at room temperature (25°) or 1 hour at 100°C.

**Insulcure 11B:** 2 hours at 100°C, (212°F) for masses less than 1/2 lb.

For masses above 1/2 lb. cure 2 hours at 80°C, (177°F) plus 2 hours at 100°C (212°F).

For optimum high temperature properties, post cure 1 hour at 150°C (302°F).

## Storage Requirements

This product has a tendency to 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.**