

INSULCAST® 3230 LV/INSULCURE 9

Epoxy; Epoxide

ITW Polymers Coatings North America

Message:

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%.

General Information			
Filler / Reinforcement	Filler		
Features	Good Electrical Properties		
	Low Viscosity		
	Thermally Conductive		
Processing Method	Casting		
Hardness	Nominal Value	Test Method	
Durometer Hardness (Shore D)	90	ASTM D2240	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	55.2	MPa	ASTM D638
Tensile Elongation (Break)	1.0	%	ASTM D638
Flexural Strength	89.6	MPa	ASTM D790
Compressive Strength	114	MPa	ASTM D695
Thermal	Nominal Value	Unit	
CLTE - Flow	2.8E-5	cm/cm/°C	
Thermal Conductivity	1.3	W/m/K	
Heat Deflection Temperature	80	°C	
Service Temperature	105	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.3E+16	ohms · cm	ASTM D257
Dielectric Strength	19	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	6.30		ASTM D150
Dissipation Factor (1 kHz)	0.020		ASTM D150
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Hardener	Mix Ratio by Weight: 4.0 to 5.0		
Resin	Mix Ratio by Weight: 100		
Shelf Life (25°C)	52	wk	
Uncured Properties	Nominal Value	Unit	Test Method
Color			
-- 1	Amber		
-- 2	Black		

Density		
-- ³	0.968	g/cm ³
-- ⁴	2.09	g/cm ³
Viscosity		ASTM D2393
25°C ⁵	0.055	Pa·s
-- ⁶	6.0	Pa·s
25°C ⁷	18	Pa·s
Curing Time		
65°C	2.0	hr
25°C	16 to 24	hr
Pot Life ⁸ (25°C)	75 to 120	min

NOTE

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|----|-------------------|
| 1. | INSULCURE 9 |
| 2. | INSULCAST 3230 LV |
| 3. | INSULCURE 9 |
| 4. | INSULCAST 3230 LV |
| 5. | INSULCURE 9 |
| 6. | Mixed |
| 7. | INSULCAST 3230 LV |
| 8. | 100 gram mass |

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