

INSULCAST® 42

Epoxy; Epoxide
ITW Polymers Coatings North America

Message:

INSULCAST 42 is a low viscosity unique silicone-epoxy co-polymer formulated to withstand severe thermal shock, low moisture absorption and excellent dielectric insulation.

INSULCAST 42 bonds well to most metals and plastics.

General Information			
Features	Bondability		
	Copolymer		
	Good Thermal Shock Resistance		
	Low Moisture Absorption		
	Low Viscosity		
Processing Method	Potting		
Hardness	Nominal Value	Test Method	
Durometer Hardness			ASTM D2240
Shore A, 25°C	75 to 80		
Shore D, 25°C	10 to 15		
Elastomers	Nominal Value	Unit	Test Method
Tensile Strength (25°C)	6.21	MPa	ASTM D412
Tensile Elongation (Break, 25°C)	180	%	ASTM D412
Tear Strength ¹ (25°C)	7.01	kN/m	ASTM D624
Thermal	Nominal Value	Unit	
CLTE - Flow	4.5E-5	cm/cm/°C	
Thermal Conductivity	0.61	W/m/K	
Service Temperature ²	-55 to 125	°C	
Linear Shrinkage (25°C)	0.20 to 0.50	%	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms · cm	ASTM D257
Dielectric Strength (25°C)	20	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	4.00		ASTM D150
Dissipation Factor (1 kHz)	6.0E-4		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			

Mix Ratio by Volume: 100

Part A

Mix Ratio by Weight: 100

Mix Ratio by Volume: 15

Part B

Mix Ratio by Weight: 10

Shelf Life (25°C) 26 wk

Uncured Properties

Nominal Value

Unit

Test Method

Color

--³ Black

--⁴ Clear/Transparent

Density

--⁵ 1.03 g/cm³

--⁶ 1.64 g/cm³

Viscosity

ASTM D2393

--⁷ 0.060 Pa·s

--⁸ 12 to 18 Pa·s

--⁹ 16 Pa·s

Curing Time

--¹⁰ 10 hr

25°C 24 hr

Pot Life (25°C) 20 to 30 min

NOTE

1. Die B

2. 155°C intermittent use

3. Part A

4. Part B

5. Part B

6. Part A

7. Part B

8. Mixed

9. Part A

10. 8 hours at 25°C plus 2 hours @ 65°C

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