



TECHNICAL DATA SHEET

TDS# 7003

DATE: JULY 2013

BACON INDUSTRIES

DIMENSIONALLY STABLE POTTING COMPOUND 124C NATURAL

Potting Compound 124C Natural is a highly filled epoxy compound featuring low coefficient of thermal expansion, high strength and low creep. These are high performance materials useful in applications requiring high dimensional stability (especially at elevated temperatures), high strength, and outstanding resistance to outgassing in applications such as gyro motors and electromechanical devices operating in extreme environments.

RECOMMENDED MIXING AND HANDLING PARAMETERS

Resin Compound	124C Natural
Activator	BA-42
Parts by weight of activator required per hundred of adhesive	6.0
Viscosity (resin) at 250°F, poise	10
Pot Life at 160°F, minutes	60
Filler Content, %	75
Recommended Cure, hr/°F	1.5/160 + 16/212

TYPICAL PROPERTIES OF CURED ADHESIVE:

Color	Light Gray
Specific Gravity	1.90
Hardness, Shore D	80
Thermal Conductivity, Btu-in/hr-ft ² -°F	5
Coefficient of Linear Thermal Expansion, 10 ⁻⁶ /°F	
between 200°F and 80°F	15
between 80°F and -65°F	14
Flexural Strength, psi	19,000
Young's Modulus in Flexure, 10 ⁶ psi	
at 70°F	1.7
Creep (3000 psi for 24 hours), mil/inch	
at 200°F	2
at 250°F	7
at 300°F	52
Linear Shrinkage Upon Cure, %	0.00
Heat Distortion Temperature (264 psi), °F	280
Moisture Absorption after ten days	
at 96%RH, %	0.06

(over)

Weight Loss after six months at 300°F, %	0.1
Machinability	Fair
Crack Resistance Factor	1130
Dielectric Constant at 1kHz	4.54
Dissipation Factor at 1kHz	0.011
Volume Resistivity, ohm-cm	6×10^{14}
Dielectric Strength, volt/mil	>300
Evolution of Volatiles	None
Gyro Fluid Resistance	Excellent
Flammability	Non-burning

INSTRUCTIONS FOR USE:

Loosen the compound container cover and heat in an oven to 250°F. Mix the contents thoroughly each time before removing material. To 100 parts by weight of Compound 124C Natural warmed to 250°F ± 5°F, add 6.0 parts by weight of activator. Mix with a mechanical stirrer at about 5000 RPM until the color is uniform (about two to five minutes). Vacuum degas for five minutes and proceed with the molding. No less than 300 grams total of compound plus activator should be mixed at one time.

FOR INDUSTRIAL USE ONLY! WARNING!!

May cause injury to skin after prolonged or repeated contact. Use with adequate ventilation.

SHELF LIFE:

The Shelf Life of these materials are greater than two years when stored in unopened containers at an average temperature below 85°F.