

# Epoxies, Ect. 50-3185 NC (Catalyst #140)

Epoxy; Epoxide

Epoxies, Etc.

## Message:

50-3185 NC is a filled epoxy encapsulant possessing excellent physical, electrical, and thermal properties. 50-3185 NC is an excellent choice where low thermal expansion, outstanding electrical insulation and/or high thermal conductivity is required. Three catalysts are available to choose from. When cured with Catalyst 190 or Catalyst 30 this system meets NASA's outgassing requirements.

- Features:
- Low Thermal Expansion
  - Excellent Electrical Insulator
  - High Thermal Conductivity
  - Protects & Conceals Circuitry
- Applications:

50-3185 NC is ideal for high voltage applications such as power supplies, transformers, high voltage insulators, bushings, etc...

General Information		
Features	Electrically Insulating	
	Thermally Conductive	
Uses	Bushings	
	High Voltage Insulation	
Processing Method	Encapsulating	
	Potting	
Physical	Nominal Value	Unit
Molding Shrinkage - Flow	0.40	%
Mechanical	Nominal Value	Unit
Flexural Strength	103	MPa
Thermal	Nominal Value	Unit
Glass Transition Temperature	47.0	°C
CLTE - Flow	3.2E-5	cm/cm/°C
Thermal Conductivity	1.1	W/m/K
Thermoset	Nominal Value	Unit
Thermoset Mix Viscosity (25°C)	3440	cP
Additional Information	Nominal Value	Unit
Outgassing	1.1% TML	
Thermal Shock Resistance	> 10	Cycles
Uncured Properties	Nominal Value	Unit
Mix Ratio by Weight (PBW)		
Part A	100	
Part B	6.5 to 7.5	
Density <sup>1</sup> (25°C)	2.24	g/cm <sup>3</sup>

Viscosity <sup>2</sup> (25°C)	48	Pa·s
Curing Time (66°C)	2.0	hr
Cured Properties	Nominal Value	Unit
Water Absorption <sup>3</sup>	0.050	%
Shore Hardness (Shore D)	94	
Compression Strength	110	MPa
Electric Strength	15	kV/mm
Relative Permittivity (1 MHz)	5.41	
Volume Resistivity	4.9E+16	ohms·cm
Dissipation Factor (1 MHz)	0.059	
NOTE		
1.	Mixed	
2.	Part A	
3.	After 24 hours	

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