

# Cosmic Epoxy E484-FDA

Epoxy; Epoxide  
Cosmic Plastics, Inc.

Message:

DESCRIPTION  
Cosmic E484-FDA is a mineral filled, glass reinforced, electrical grade epoxy molding compound which is supplied in a granular form. E484-FDA has been approved for direct food contact use.

FEATURES  
It has excellent mechanical strength and electrical properties, especially at high temperatures. It has passed NASA out gassing tests.

APPLICATIONS  
Used in electrical hardware applications such as underwater connectors and other insulation applications.

General Information		
Filler / Reinforcement	Glass Fiber	
	Mineral	
Features	Food Contact Acceptable	
	Good Electrical Properties	
	High Strength	
Uses	Connectors	
	Electrical Parts	
	Insulation	
Agency Ratings	FDA Food Contact, Unspecified Rating	
Forms	Granules	
Physical	Nominal Value	Unit
Specific Gravity	1.95	g/cm <sup>3</sup>
Bulk Factor	2.0 to 5.0	
Molding Shrinkage - Flow	0.20 to 0.40	%
Water Absorption <sup>1</sup> (Equilibrium, 50°C)	0.25	%
Hardness	Nominal Value	Unit
Barcol Hardness	65 to 75	
Mechanical	Nominal Value	Unit
Tensile Strength	96.5	MPa
Flexural Modulus	17900	MPa
Flexural Strength	131	MPa
Compressive Strength	207	MPa
Impact	Nominal Value	Unit
Notched Izod Impact	32	J/m
Thermal	Nominal Value	Unit
Glass Transition Temperature	165	°C

CLTE - Flow		
-- <sup>2</sup>	2.9E-5	cm/cm/°C
-- <sup>3</sup>	9.2E-5	cm/cm/°C
Thermal Conductivity	0.42	W/m/K
Heat Distortion	260	°C
Dielectric Breakdown - Wet	60000	V
Electrical	Nominal Value	Unit
Surface Resistivity	> 1.0E+15	ohms
Dielectric Strength <sup>4</sup> (Wet)	14	kV/mm
Dielectric Constant <sup>5</sup>		
1 kHz	5.40	
1 MHz	4.70	
Dissipation Factor <sup>6</sup>		
1 kHz	0.011	
1 MHz	8.0E-3	
Arc Resistance	186	sec
Injection	Nominal Value	Unit
Processing (Melt) Temp	150 to 180	°C
Injection Pressure	3.45 to 55.2	MPa
NOTE		
1.	48 hrs	
2.	Alpha 1	
3.	Alpha 2	
4.	Method B (Step-by-Step)	
5.	Wet	
6.	Wet	

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