

Product Data Sheet



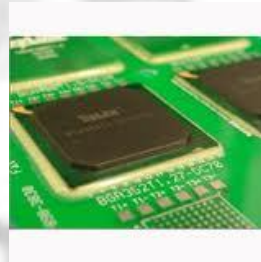
Product

MCT 9116-04CUFL

Extremely Thermally Conductive Flowable BGA Underfill

DESCRIPTION: 9116-04CUFL is a nitride filled, single component, frozen, epoxy compound for BGA and flip chip underfill applications with a TC of 2.88W/mK. This product is designed to release entrapped air rapidly during cure resulting in a smooth, pinhole free surface. The viscosity is such that this material will flow nicely under the component and around the solder or conductive epoxy balls. Adhesion to Si, GaS, GaN, glass, epoxy molded components, is excellent.

Appearance: Color:	Grey
Viscosity (cps):	3100
Filler	AlN+ 85% - 88%
Filler size	~7um
Hardness (Shore D)	75
Coefficient of Thermal Exp. (in/in/°C x 10 ⁻⁶)	
Below Tg	45
Above Tg	~188
Tg °C	~92
Thermal Conductivity (W/mK)	2.88
Modulus	1.5
Cure Shrinkage (%)	0.189
Tensile Strength (psi)	9600
Water Absorption (%)	< 0.20
Dielectric Strength (volts/mil)	475
Volume Resistivity (Ω-cm)	1 x 10 ¹⁵
Power Factor (60 HZ)	0.028
Dielectric Constant (60 HZ)	4.3
Post Cure Ionics 883/5011.3.8.7	Cl=<6ppm, Na+=<3.3ppm, K+=<1.1ppm
Teflon Flask 5 gm sample using 20-40 mesh, 50 gm DI H ₂ O, 100°C for 24 hours	



Curing: Full Cure: 1 hr @ 80°C, 30 min @ 100°C, 20 MIN @ 150°C

Shipping: Freeze Packs – No Dry Ice

Storage: Shelf Life: 4-5 days at 20-25°C, 3 months @ -10°C, 6-9 months @ -40°C in original sealed containers.