

LOCTITE EIF 1000

Known as ISOSTRATE

February 2016

PRODUCT DESCRIPTION

LOCTITE EIF 1000 provides the following product characteristics:

Technology	Phase Change
Appearance	Amber
Product Benefits	<ul style="list-style-type: none">• High dielectric strength• Excellent cut-through resistance
Operating Temperature Range	up to 150°C
Application	Thermal management
Typical Assembly Applications	<ul style="list-style-type: none">• Used between any non-isolated heat dissipating component and a heat sink or chassis• Electrical isolator• Replacement for silicone rubber pads or grease/mica installations

LOCTITE EIF 1000 electrically isolating phase change thermal interface material is suitable for use between a heat sink and variety heat generating components. This product is supplied as a dry compound coated onto a Kapton™ MT substrate. The compound is designed to flow at the phase change temperature, conforming to the surface features of the heat sink and component. Upon flow, air is expelled from the interface, reducing thermal impedance, performing as a highly efficient thermal transfer material.

LOCTITE EIF 1000 is supplied as die-cut preforms to match a wide variety of electronic components. Custom parts are also available upon request with low cost tooling.

LOCTITE EIF 1000 meets UL 94 V-0 Flammability rating.

MATERIAL PROPERTIES

LOCTITE EIF 1000 is supplied in a range of substrate thicknesses to match surface finish and flatness considerations in the interface area and to provide a wide range of dielectric strength capability.

KA

Thickness:			
Substrate	mm	0.051	
	(inches)	(0.002)	
Total	mm	0.076	
	(inches)	(0.003)	
Thermal Impedance , ASTM-D-5470:			
@ 80 psi	°C-cm ² /W	1.29	
	(°C-in ² /W)	(0.2)	
Thermal Conductivity , W/(m-K)		0.45	

KB

Thickness:			
Substrate	mm	0.025	
	(inches)	(0.001)	
Total	mm	0.051	
	(inches)	(0.002)	
Thermal Impedance , ASTM-D-5470:			
@ 80 psi	°C-cm ² /W	0.776	
	(°C-in ² /W)	(0.12)	
Thermal Conductivity , W/(m-K)		0.45	

K3

Thickness:			
Substrate	mm	0.076	
	(inches)	(0.003)	
Total	mm	0.102	
	(inches)	(0.004)	
Thermal Impedance , ASTM-D-5470:			
@ 80 psi	°C-cm ² /W	1.88	
	(°C-in ² /W)	(0.29)	
Thermal Conductivity , W/(m-K)		0.45	

ELECTRICAL PROPERTIES

While phase change compound incorporated in LOCTITE EIF 1000 is not electrically isolating, electrical isolation is achieved through the use of the Kapton® MT substrate used. The data below is taken from Dupont's Kapton® MT Technical Data Sheet.

Volume Resistivity, ohm-cm	1×10 ¹⁴
Dielectric Strength, ASTM D149-91, VAC/mil	4,500 to 5,000
Dielectric Constant	4.2

PHYSICAL PROPERTIES

Phase Change Temperature, °C	60
Viscosity above phase change temperature	Thixotropic
Tensile Strength	KPa 1.24×10 ⁵
	(Kpsi) (18)
Cut-Through Resistance (per Dupont Test Method)	Kg 18.1
	(Lbs) (40)

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).