Product Data Sheet

RoHS/WEEE and Halogen Free

MicroCoat Technologies
http:www.m-coat.com
Unparalleled in Polymer Coatings and Adhesives Technology

Product
MCT 36190-2GT

Non-Conductive Die Attach Adhesive

A High Performance *Single Component, Non Frozen* Non-Conductive Epoxy For SMD and Die Attach *With an Operating Temperature Range of -65°C to +240°C*

MicroCoat 36190-2GT features a unique balance of high performance properties including both high shear and peel strengths along with convenient handling and high/low temp properties. This is a single component system formulated to cure at elevated temperatures. This is a one part thermosetting non-conductive epoxy designed primarily for die attaching semiconductors and surface mount devices in military, "down-the-hole" hybrids, optoelectronics, automotive sensors, transducers, etc. The material is a thixotropic paste which may be applied by screen printing or syringe. It is 100% solids, and posses' good handling and storage properties. This Al2O3 filled non-conductive die attach adhesive is designed to bond ICs and components to advanced substrates such as ceramic, PBGAs, CSPs, plated lead frames, and array packages. Hydrophobic and stable at high temperatures, the adhesive produces a void-free bond line with excellent interfacial adhesion strength to a wide variety of organic and metal surfaces including solder mask, BT, FR, polyimide, gold, Kapton and Mylar. This material is formulated to provide high cohesive energy, adhesive strength, and elongation at break.

Composition Properties

Color:		Yellow (Turns slightly tan when cured)
Filler:		Al_2O_3
Contents:		100% solids
Viscosity:		Dispensable Paste
Volume Resistivity		$>10^{14}$
Thermal Conductivity		2.13 W/mK (Laser flash)
CTE Alpha 1 ppm/°C		28
CTE Alpha 2 ppm/°C		200
Modulus of Elasticity MPa		
RT		14,950
250C		78
T_g °C		185
Die Shear (psi)	25 mil^2 Si Die @RT	>6000
	25 mil^2 Si Die @250C	>4000
Hardness, Shore D		70
Moisture Absorption %		<.2
Outgassing per Mil-Std-883/5011 ASTM E595		Passes
Post Cure Ionics Mil-Std-883/5011.3.8.7		*Cl=<6ppm, Na+=<3.3ppm, K+=<1.1ppm*

Processing Procedures
Mixing: The material should be lightly stirred prior to use if used from a jar. Not required if in a syringe

Application
The material may be applied by screen printing or syringe dispense

Curing: Cure @ 175C for 30 minutes. Optimum conditions will vary depending upon application and substrate material and will need to be determined experimentally. This material will fully cure using most Pb free cure schedules of 250C - 260C.
Snap Cure: Can be accomplished at 175C for 3 minutes

Storage MCT 361902GT should be stored in sealed containers away from heat or flames. It has a shelf life (pot life) of 12 months at a storage temperature of 25°C; up to 18 months if refrigerated (*Do not freeze*). Material ***may*** be returned to refrigerator after using partial syringes or jars.

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