

MicroCoat Technologies

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Unparalleled in Polymer Coatings and Adhesives Technology™

PRODUCT DATA SPECIFICATION

SMD Conductive Adhesive MCT 3685 Series

MicroCoat MCT 3685 Series are two part high current density silver filled conductive adhesives. They have a high bond strength to many types of substrates such as copper, tin/lead leads, aluminum, alumina, and glass. MCT 3685 has excellent electrical and thermal conductivity and simple mix ratios. It will not completely cure at room temperature. This material may also be used as a "solder" or circuit trace repair tool, and for external lead attachment of discrete devices and leads.

Composition Properties:

Product:	3685-25	3685-56	3685-56LV	3685-HT-HC	3685-HT-SP
Silver Content:	80%	80%	80%	80%	85%
No. of Components	1	2	2	2	2
Mixed Ratio by Wt.	NA	1:1	100:4	100:2	1:1
Mixed Viscosity, cP @ 25C Paste		35K-40K	4K – 6K	40K – 45K	35K – 45K
Pot Life @ 25C 25 gms	NA	1 hr	1 hr	48 hrs	>48 hrs
Cure time/temp hr °F	2/300	2/200	2/200	2/200	1/350

Typical Cured Properties

Volume Resistivity: ohms-cm 0.01	0.0009	.0008	<0.0001	<0.0004
Tensile Shear Strength psi: >2500 psi	1700	1100	1700	1400
Service Temperature: °F/°C				
Continuous:	340/170	340/170	340/170	390/200
Intermittent:	375/190	375/190	375/190	480/250
Thermal Conductivity W/m-°K 1.9	2.2	2.2	2.5	4.1
Hardness Shore D	76	72	84	90

Processing Procedures

Mixing: MCT 3685 (2 part systems) are 100% solids system supplied in two parts: MCT 3685 "A" (resin) and "B" (hardener). The two components should be weighed out in equal amounts onto a flat, non porous substrate such as glazed ceramic or glass petri dish and mixed thoroughly with a flat blade for approximately 4 minutes prior to use. Thinning is not recommended.

This material can also be supplied in A/B 10cc syringes. 25 grams "A" / 25 grams "B"

Application: Prior to the application of MCT 3685, all surfaces should be clean and dry, and grease free. The mixed epoxy may be applied by syringe or screen printing. If adhering metal components together as in a structural assembly, the parts should be clamped together during the cure process.

Printing: A polyester, nylon, or stainless steel screen should be used with a 150-325 mesh/in pattern, and an emulsion thickness of 10-25 microns. Use of a hard durometer sharp squeegee is recommended.

Storage: Material should be stored in sealed containers away from heat or flames. It has a shelf life of 6 months at a storage temperature of 25°C ± 1°C