

Product Data Sheet

RoHS/WEEE, REACH,
and Halogen Free



Product

MCT 2-657/45

SINTERED SILVER FLEXIBLE CONDUCTIVE DIE ATTACH ADHESIVE WITH VERY FINE LINE CAPABILITIES

DESCRIPTION: MCT 2-657/45 is a single component, flexible, solvent-resistant, electrically conductive sintered silver adhesive that has been optimized to allow for a variety of application methods including screen printing, stenciling, and dispensing circuits with fine line widths and spacing. This product features excellent adhesion to Indium – Tin Oxide coated surfaces, polyimide, polyester, glass, polycarbonate and other substrates and has virtually no bleed and minimal spreading, tailing, or stringing. This product is very resistant to methyl ethyl ketone and other aggressive solvents. It is also very resistant to flexing, scratching, and creasing. Some applications for MCT 2-657/45 include, but are not limited to; touch screen bus bars, solar cell grid lines, EMI/RF shielding of polyimide flexible circuits, polymer thick film circuitry, and membrane switches. MCT 2-657/45 is a super fine particle version of MCT 0802-31.

TYPICAL PROPERTIES:

Property	Value	Units
Viscosity (CP-51 10/s, 25°C)	~2,400	cps
Thixotropic Index (1/10, 25°C)	~5	-
Volume Resistivity (as low as*)	0.00020	Ω-cm
Sheet Resistivity (as low as*)	0.080	Ω/sq/mil
Thermal Conductivity	>150	W/m-K
Specific Gravity	2.35	g/cc
Continuous operation temperature	-55 to 200	°C
Thermal Stability	Good to 260	°C
Solderable	No	-
Filler	Silver	-
% Silver (cured)	> 85	-
Hydrolytic Stability	Excellent	-
Solvent Resistance	Excellent	-

CURE SCHEDULE AND CONDUCTIVITY:

Cure Temperature (°C)	Cure Time	Conductivity Achievable (Ω/sq/mil)
230	2 hours	< 0.500
250	60 min.	< 0.080

Note: Cure times are suggestions and customers are advised to experiment for what works best in their application.

SAFETY & HANDLING: Use with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

STORAGE: Shelf life: 4 days at 25°C; 6 months at -10°C

- *Upon receipt of shipment, syringes should be unpacked immediately and stored in freezer at -10° C.*
- *Do not store syringes in deep freeze (-40°C).*
- *Do not handle syringes from the body of the packaging. Handle from the ends of the packaging.*
- *Store syringes vertically (upright) with tip side down. Do not store syringes horizontally (sideways). Syringes should be stored in this manner until needed for production.*
- *Syringes are labeled with product number, lot number, and manufacturing date. It is important that the syringes are used according to earliest manufacturing date, "FIFO" (first in, first out).*

PREPARING SYRINGES FOR USE:

- To thaw syringes, remove them from the freezer taking care not to handle the body of the syringe (handle from the top and/or the tip) and allow them to acclimate to ambient temperature with the tip down.
- Do not use hands to warm syringe.
- The thawing time for each syringe will vary based on fill level and a minimum of 45 minutes for 3cc, 5cc, and 10cc and a minimum of 90 minutes for 30cc syringes should be observed.
- Using a heat source to thaw syringes is not advised.
- Proximity to a heat source during thawing should be greater than 3 feet.
- Although this material can be refrozen minimizing freeze-thaw cycles is recommended.

SYRINGE INFORMATION:

- MicroCoat syringes have Luer-lock fittings and are compatible with most types of dispensing equipment.
- MicroCoat syringe are provided packaged with smooth flow piston technology design for use on automated or manual dispense equipment and are not hand plunger equipped.
- MicroCoat routinely provides syringes in volumes of 3cc, 5cc, 10cc, and 30cc. Other sizes may be available upon request.

The information contained herein, is, to the best of our knowledge accurate. However, MicroCoat Technologies, LLC does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. The information contained herein is considered typical properties and is not intended to be used as specifications for our products. This information is offered solely to assist purchasers in selecting the appropriate products for purchaser's own testing. All products may present unknown hazards and should be used with the proper precautions. Although certain hazards are described herein and in the Material Safety Data Sheets, we cannot guarantee that these are the only hazards that exist. Repeated and prolonged exposure to epoxy resins can cause sensitization or other allergic responses.