

Product Description

Dycotec DM-AS-10000S is a silver epoxy based conductive adhesive that is used for thin film PV, sensors and general printed electronics applications. The paste is compatible with manual, syringe and screen printing application.

Product Benefits

- Screen printable
- Long screen residence time > 8 hours
- Long pot life >1 week
- Excellent electrical conductivity
- Compatible with a range of deposition processes
- High mechanical hardness

Paste Preparation

DM-AS-10000S is a two part silver epoxy based conductive adhesive system. It requires mixing of the Part B, DM-AS-10000B and the Part A, DM-AS-10000A in the correct ratios to form the DM-AS-10000S paste. The contents of one container of the Part B, DM-AS-10000B system must be added completely to a pot of DM-AS-10000A. The combined pastes should then be mixed slowly. Avoid rapid stirring to prevent air entrapment during the stirring process. As soon as the product is activated, the material should be used within a week. Degassing procedures are available on request.

Properties of Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) <i>(Lamy, cone and plate 50s⁻¹, 20°C)</i>	20-30
Thinner	For slight adjustments in viscosity, use DM-AS-10000S-DT
Pot life	>1 weeks
Solids Content	62-68 %
Solvent	15-20%

Paste Processing Conditions

The paste can be cured using either a convection oven, infra red heating or a hot air gun. Typical drying parameters used are 140°C for 60 mins for a convection oven and 1-2 mins for hot air gun processing. Drying times may be adjusted to achieve the optimum resistivity depending on manufacturing process set-up.

Properties of Cured Paste

Test	Properties
Sheet Resistance	<40 mΩ/□/mil (hot air gun) <200 mΩ/□/mil (120°C, 60 mins) <160 mΩ/□/mil (140°C, 60 mins)
Volume Resistivity	<0.0001 Ω.cm (hot air gun) <0.0005 Ω.cm (120°C, 60 mins)
Pull Strength (ASTMD4541-02)	>13.25 Kg/cm ²
Pencil Hardness	8H

Clean-Up

Equipment can be cleaned using isopropanol alcohol or acetone.

Storage and shelf-life

Containers should be stored at room temperature with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment. Avoid introduction of water into the paste. Dycotec Materials cannot assume responsibility for a paste that has not been stored in appropriate conditions or where the pastes have been contaminated following use. After mixing, the paste should be stored in a fridge (4°C) Please ensure the material has time to reach room temperature before use.

Safety and Handling

For safe use of this product, please review relevant material safety and datasheet (MSDS).

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All information reported in the datasheet is for experimental work undertaken in our laboratories and illustrates typical values only. Processing conditions may vary depending on customers' experience and their application requirements and manufacturing process equipment set-up.

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