

Product Description

DM-SAS-10030-ST is a single part stencil/screen printable silver conductive adhesive paste that provides excellent adhesion for applications that require assembly joint flexibility. The paste can be used on flexible low temperature substrates such as textiles, TPU and PET for applications such as wearable devices, sensors and medical devices. Excellent print resolution ensures the paste is well suited for fine pitch components. The adhesive maintains flexibility when fully cured, minimising the stress concentrations that can lead to assembly joint failure.

Product Benefits

- Low temperature curing temperature (120°C)
- Excellent adhesion ~70 Kg/cm² (1206 LED)
- Excellent electrical conductivity (<200 mΩ/□/25µm)
- Fine line print capability (<200 µm)
- Flexible assembly joint minimising stress that can lead to device failure

Paste Preparation

Once the paste has been removed from the container for printing, this may introduce contamination. Please do not replace the paste in the container. The paste should be gently stirred before use avoiding incorporation of air bubbles.

Properties of Uncured Paste

Test	Properties
Viscosity after mixing (mPa.s) (Cone and plate 1.5s ⁻¹ , 25°C)	>250
Thinner	For adjustments in viscosity, use DM-SAS-10030-DT
Coverage	85 cm ² /g at 10 µm thickness
Density	2.75 g/cm
Conductive Filler Type	Silver
Solids Content	86-91 % (Vacuum oven dry at 80°C for 30 mins)

Paste Processing Conditions

Parameter	Typical Properties
Substrate	Textiles, TPU, PET, PC, tin
Deposition Method	Stencil/Screen*
Stencil 100 µm stencil	100 µm stencil
Print speed 25 mm/s	25 mm/s
Squeegee type Metal blades	Metal blades
Screen residence time 1 hour	1 hour

*For screen print the paste viscosity should be carefully thinned using DM-SAS-10030-DT. As a starting point it is recommended to dilute with 16 part DM-SAS-10030-ST to 1 part DM-SAS-10030-DT by mass.

Pastes should be cured at 120°C for 30 mins to remove solvents in an IR or convection oven. Curing times may be reduced to achieve the optimum resistivity depending on manufacturing process set-up.

The paste is compatible with a broad range of Dycotec conductive silver products, please email info@dycotecmaterials.com for further information.

Properties of Cured Paste

Test	Typical Properties
Sheet Resistance	<200 mΩ/□/25 μm (120°C)
Typical Print thickness	28 μm (100 μm stencil)
Maximum Long Term Operating Temperature	85°C
Pull Strength (ASTM-D4541)	>3.5 Kg/cm ² (tin surface)
Die Shear Strength	~70 Kg/cm ² (1206 LED), ~50 Kg/cm ² (0402 LED)

Durability

Test	Typical Properties
HALT (85oC/85% Relative Humidity, 1000hrs)	No change in adhesion

Clean-Up

Equipment can be cleaned using benzyl alcohol then wipe dry with isopropanol.

Storage and shelf-life

For optimum results, the containers should be stored in a fridge (4-7°C) with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment. Please ensure the material has time to reach room temperature before use. 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.

Safety and Handling

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

For more information, please contact:

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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. Note: The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, Dycotec Materials specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale of use of Dycotec Material's products. Dycotec Materials specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits. The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Dycotec Material patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one of or more UK or foreign patents or patent applications.