

## 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/cm<sup>2</sup> (1206 LED)
- Excellent electrical conductivity (<100 mΩ/□/25 μm)
- 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 the Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) (Cone and plate 1.5s <sup>-1</sup> , 20°C)	>300
Thinner	For adjustments in viscosity, use DM-SAS-10030-DT
Coverage	85 cm <sup>2</sup> /g at 10 μm thickness
Density	2.75 g/cm
Conductive Filler Type	Silver
Solids Content	86-91 %

## Paste Processing Conditions

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

\*For screen print the paste viscosity should be carefully thinned using DM-SAS-10030-DT

Pastes should be dried, before curing, at 120°C for 30 mins to remove solvents in an IR or convection oven. Drying and 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](mailto:info@dycotecmaterials.com) for further information.

## Properties of the Cured Paste

Test	Properties
Sheet Resistance	<100 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 <sup>2</sup> (tin surface)
Die Shear Strength	~70 Kg/cm <sup>2</sup> (1206 LED), ~50 Kg/cm <sup>2</sup> (0402 LED)

## Durability

Test	Properties
HALT (85°C/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.

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