

## Product Description

Dycotec DM-IN-7020S is a thermally cured paste for screen printing for general use as an insulating layer in electronic applications. The screen printed structures are oven cured at 140–150°C. The high abrasion resistance provides a robust surface for further processing such as printing additional electronic layers on top of the cured insulating layer.

## Product Benefits

- Formulated for screen printing
- Thermally cured
- High abrasion resistance
- Electrically insulating
- Excellent adhesion

## Paste Preparation

DM-IN-7020S is a 2-part paste system. It requires mixing of the Part B, DM-IN-7020B and the Part A, DM-IN-7020A in the correct ratios to form DM-IN-7020S. The contents of one container of the Part B, DM-IN-7020B system must be added completely to a pot of DM-IN-7020A. The combined pastes should then be mixed slowly. Avoid rapid stirring to prevent air entrapment during the stirring process. Once the product is activated, the material should be used within 24 hours. After 24 hours, quality cannot be guaranteed. Once the paste has been removed from the container for printing, this may introduce contamination. Please do not replace the paste in the container.

## Properties of the Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) (Lamy, cone and plate 50s <sup>-1</sup> , 20°C)	2.5 - 3.5
Substrate compatibility	Glass, ITO-Glass, plastics, FR4

## Paste Processing Conditions

To achieve a print thickness of ~12 µm, typical print parameters are provided in the table below.

Parameter	Typical Properties
Substrate	Glass, ITO-Glass, Plastics, FR4
Screen	325 SS, 13 µm emulsion
Print gap	1.5 mm
Flood speed	30 mm/s
Print speed	45 mm/s
Squeegee type	60 durometer (clear)
Squeegee pressure	7 Kg
Squeegee holding angle	45°
Curing temperature	140°C
Curing time	20-60 mins

These parameters will typically achieve a print thickness of 25-30 µm after cure.

## Paste Curing Conditions

Test	Properties
Thermal curing	140°C for 60 mins

## Properties of the Cured Paste

Test	Properties
Pencil hardness scale	5H
Adhesion	5B
Volume Resistivity	$3.8 \times 10^{14} \Omega \cdot \text{cm}$
Surface Resistivity	$1.9 \times 10^{14} \Omega/\square$

## Storage and Shelf-life

Store at room temperature (10-25°C) with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment.

Containers should be stored as specified with lids tightly sealed. We cannot assume responsibility for an ink that has not been stored in appropriate conditions or where the ink has been contaminated following use. Equipment can be cleaned using alcohols such as iso-propanol.

## Safety and Handling

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

For more information, please contact:

Dycotec Materials Ltd  
Unit 12, Star West  
Westmead, Westlea  
Swindon, Wiltshire  
SN5 7SW UK  
Email: [info@dycotecmaterials.com](mailto:info@dycotecmaterials.com)  
Tel: +44 (0)1793 422598  
[www.dycotecmaterials.com](http://www.dycotecmaterials.com)

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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