 PRODUCT INFORMATION SHEET

C2171023D1
Carbon Graphene Paste

PRODUCT DESCRIPTION
This product is a Carbon/Graphene Paste. It is designed as a screen printable conductive paste for use in a variety of applications, including conductive tracks and biosensors.

Product Benefits
This paste has a low electrical resistance, good adhesion to polymeric substrates and good scratch resistance.

PROCESSING
Prior to printing the paste should be stirred for 20 to 30 minutes to ensure homogeneity.

Screen Printing Equipment
Semi-Automatic, manual

Ink Screen Life
>3 hours when printed at the recommended maximum temperature of 25°C.

Screen Types
The paste is suitable for use with polyester or stainless steel meshes in the range of 156 to 230 tpi (60 to 110 tpc).

Typical Drying Conditions
Dry at 130°C for 30 minutes in a box oven.

Clean Up Solvent
Ethoxy Propanol

Substrate
Suitable for polymeric such as PET, PBT, PVC, or Ceramic.

Storage
The product should be kept sealed, in its container, and stored at room temperature (20°C)

Shelf Life
In a sealed container, stored correctly, the shelf minimum 6 months from despatch.

PHYSICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Solids Content at 130°C, 90 minutes</td>
<td>34.0 - 35.0%</td>
</tr>
<tr>
<td>Viscosity Haake RS1 C20/2º Til at 230 sec⁻¹ at 25°C</td>
<td>5.5 - 7.5 Pa s</td>
</tr>
<tr>
<td>Sheet Resistivity Printed through 230 stainless steel mesh with 13 micron emulsion</td>
<td>&lt; 7.5 ohms/sq normalised to 25µm</td>
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<tr>
<td>Cured Thickness Printed through a 230 stainless steel mesh with 13 micron emulsion</td>
<td>Typical 8-9 microns</td>
</tr>
<tr>
<td>Cyclic Voltammetry Oxidation potential %CV on 3 runs</td>
<td>250-300mV &lt;5%</td>
</tr>
<tr>
<td>Adhesion On Valox (PBT) On Autostat CT4 (PET)</td>
<td>5B 5B</td>
</tr>
<tr>
<td>Pencil Hardness On Autostat CT4 (PET)</td>
<td>3H</td>
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</tbody>
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SAFETY AND HANDLING
These pastes are intended for industrial use by trained personnel. It is important for workers to avoid overexposure to chemicals contained in these products.

Read the Material Safety Data Sheet (MSDS) and product labels before using the products.

Keep product container closed when not in use to prevent solvent evaporation and spilling hazard

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