

Creating Material Change



SynerG Conductive Ink & Paste F070018 Technical Data Sheet



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SYNERG Conductive Ink & Paste

Transparent Graphene Ultra-High Conductive Flexo/Gravure Ink

Haydale's SYNERG F070018 is a Flexo/Gravure ink. It is particularly designed for optimal properties of ultra-high conductivity and scratch resistance with good adhesion on polyester films to meet the requirements of transparent electrode applications.

Chemical family: Ultra-High Conductive Flexo/Gravure Ink
 Health and Safety: See the Material Safety Data Sheet (MSDS) and product labels before use.

Physical properties

Test Item	Performance
Appearance	Dark blue liquid
Solid content	1.0 – 2.0%
Surface resistivity: The properties on PET coated by a bar coater (wet film thickness of 22 µM), curing condition: 130°C for 5 min	120 – 220 Ω/sq
% Transmission	80 – 88%
Surface tension	30 -35 mN/m
Pencil hardness	4H – 9H
Scratch resistance	5B (Excellent)
pH	2.0 – 3.0 at 25°C + 2°C
Density	0.9 – 1.2 g/cm ³ at 25°C + 2°C
Surface tension	28 - 30 mN/m
Viscosity: Value measured by Brookfield DV-II+ Pro at spindle number of S62	100 – 200 mPa·s

Physical properties

Typical Guidelines and Methods	
Printing equipment	Flexo/Gravure or Slot die, Semi-automatic or manual.
Substrate types	Typical commercial corona or chemical treated PET substrate.
Curing conditions	Can be dried at 130-150°C for 3-5 minutes in box oven.
Before use	Stir vigorously for 15-30 min to be homogeneous and filter the ink before use. The lid of ink container should be closed to prevent evaporation of any solvent.
Clean up solvent	Pre-clean the substrate surface with ethanol or iso-propanol to eliminate any contaminant and to protect non-homogeneous film after coating.
Storage	Store at 5-25 °C and avoid freezing. Close the lid of product container tightly after use to prevent solvent evaporation.
Shelf life	6 months.

The content supplied in this technical data sheet ("Information") supersedes all previous versions supplied. Version 1, September 2019

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