

Creating Material Change



SynerG Conductive Ink & Paste I073065 Technical Data Sheet



Innovation underpins everything we do
www.haydale.com  [HaydaleGraphene](https://twitter.com/HaydaleGraphene)

SYNERG Conductive Ink & Paste

Transparent Graphene Conductive Ink

Haydale's SYNERG I073065 is an inkjet ink which is utilised to produce ink film with transparency and high electrical conductivity. It is particularly designed to apply for coatings with good adhesion properties on glass and PET surfaces.

Chemical family: Graphene PEDOT/PSS composite
 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	0.5 – 1.5%
Surface resistivity: The properties on glass coated by spin coating, curing condition: 130°C for 3 min	450 – 2000 Ω/sq
% Transmission	85 – 95%
Pencil hardness	HB
Scratch resistance	3B
pH	7.0 – 8.0 at 25°C
Density	0.9 – 1.2 g/cm ³ at 25°C
Viscosity: Value measured by Brookfield DV-II+ Pro at spindle number of S61	10 – 13 mPa·s

Physical properties

Typical Guidelines and Methods	
Printing equipment	Semi-automatic spin coating system.
Substrate types	Typical commercial polyester (Melinex 507 is recommend) and glass.
Curing conditions	Can be dried at 130-150°C for 3-5 minutes in box oven.
Before use	Stir vigorously at 60-80°C 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
 The Information should be used solely as guidance for the safe handling, storage, processing and/or use of the Product and is only typical of the methods described. The Haydale Group (Haydale Group means Haydale Limited, as a subsidiary of Haydale Graphene Industries plc., and any subsidiary or holding company from time to time and any subsidiary from time to time of any holding company of Haydale Limited) gives no express or implied warranty or guarantee or representation as to the behaviour of the Product described herein during any handling or storage or processing or use of the Product. To the extent permissible by law the Haydale Group shall under no circumstances whatever be liable whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any damage, including loss of profit, or any indirect or consequential loss arising under or in connection with any handling or storage or processing or use of the Product.



Contact us: T: +44(0)1269 842946 E: info@haydale.com