

Creating Material Change



FLEXC0001 Smart Heater Ink Technical Data Sheet



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Screen Printable Graphene Ink

Product name: FLEXC0001 Graphene Heater Ink
Synonyms: Graphene ink, GNP ink
Chemical family: Functional graphene ink
Properties: Electrically conductive, flexible
Typical uses: Garments, gloves, shoe & boot insoles, jackets

Key features:

- Contain functionalised HDPlas® Graphene Nanoplatelets (GNPs)
- Designed for screen printing
- Electrically conductive
- Carbon, organic solvent-based ink (no metal)
- Curable at 120-140°C
- Print onto cotton, polyester/cotton blends
- Flexible on appropriate substrate

Solids content: 41%
Viscosity: High to medium press ready. No thinning required
Stencil: HD200, HD220 emulsion 100-200mic or Cap film 100mic+
Sheet resistivity: 50 Ω /sq normalised to 50 microns (μ m) two print layers
Coverage: 30m² per kg
Squeegee shore: 70 shore hardness
Wash fastness: BS EN ISO 6330: 2001

Handling guidelines	
Printing equipment	Screen printer; semi-automatic, manual, fully automatic
Mesh count	Meshes of 61 - 77 threads per cm
Substrates	Cotton, poly-cotton mix
Drying conditions	Can be dried at 130°C for 3-4 minutes infrared or gas drying tunnel
Clean-up solvent	IMC00001 on press wash and mesh opener <i>Warning - do not use other screen cleaners as this may result in the ink gelling and the mesh blocking prematurely</i>
Storage	When not in use, the product should be kept sealed in its container and stored at controlled temperatures between 7-20°C <i>Warning - do not allow to freeze</i>
Shelf life	Ink in an unopened container has a recommended shelf life of 6 months from date of delivery

All values reported here are results of experiments conducted in our laboratories and are intended to illustrate the products performance. They are not intended to represent the final product specifications.

Health and Safety

These inks are intended for research and industrial use by trained personnel. It is important for workers to avoid overexposure to chemicals contained in these products. Always consult 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.

The content supplied in this technical data sheet ("Information") supersedes all previous versions supplied. Version 5, December 2020

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