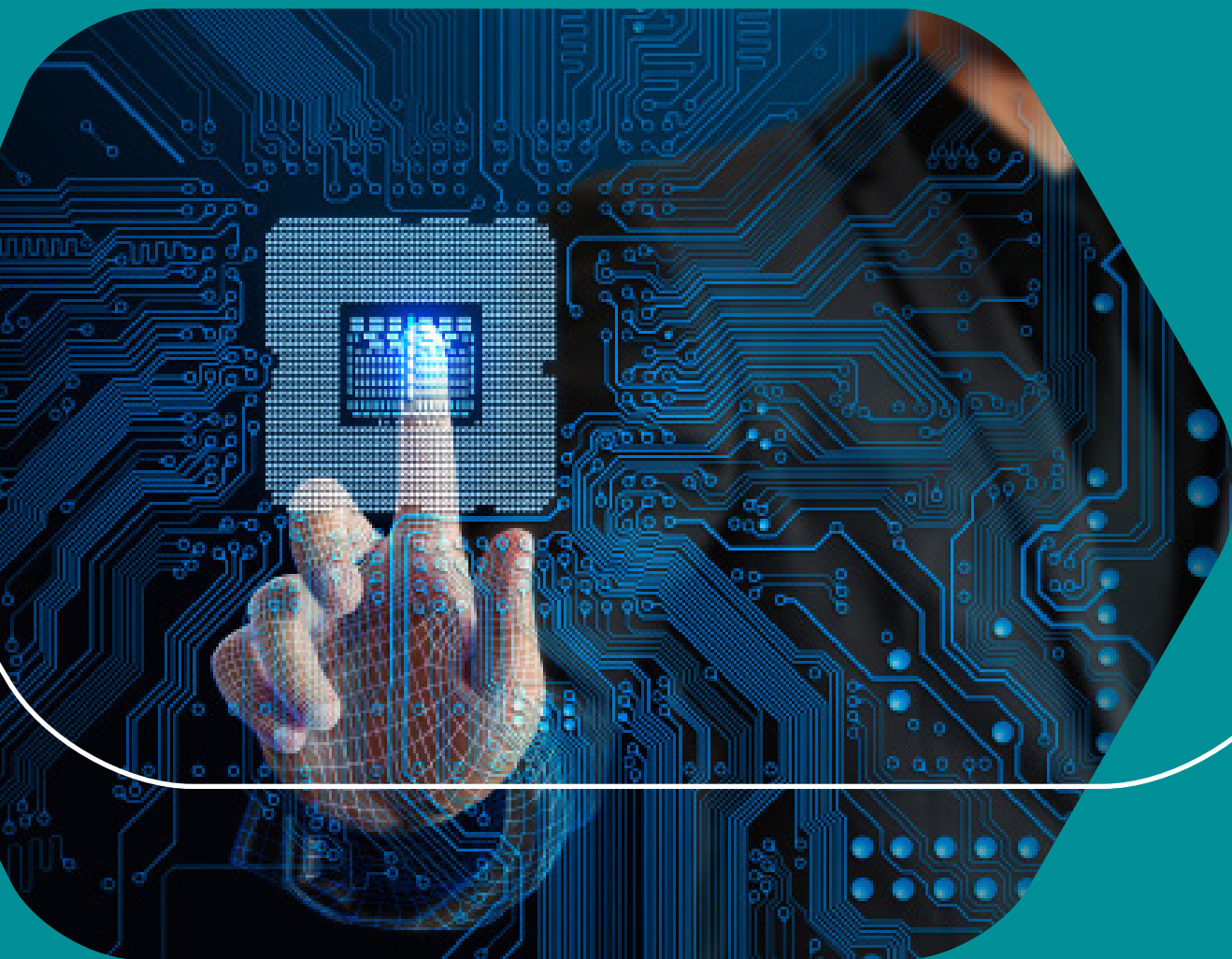


# Creating Material Change



## HDPlas<sup>®</sup> IGSR00002 Screen Printable Graphene Ink Technical Data Sheet



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# Screen Printable Graphene Ink

Product name: HDPlas® IGSR00002  
Synonyms: Graphene ink, GNP ink  
Chemical family: Piezoresistive ink, pressure sensitive ink  
Properties: Insulating, piezoresistive  
Typical Uses: Pressure sensors

## Key features:

- Contain functionalised HDPlas® Graphene Nanoplatelets (GNPs)
- Designed for screen printing
- Piezoresistive (at multiple layers)
- Carbon, organic solvent-based ink (no metal)
- Curable at 100-130°C
- Can be applied to a variety of materials
- Flexible on appropriate substrate
- Part of a range of piezoresistive inks

Solids content: 18%  
Viscosity: High to medium press ready. Thinner - THN00001  
Stencil: HD200, HD220 emulsion - 20 mic stencil or 25 mic capillary film  
Coverage: 30m<sup>2</sup> per kg  
Squeegee shore: 70 shore hardness  
Piezoresistive response: 100 – 3000N Force

Handling guidelines	
Printing equipment	Screen printer; semi-automatic, manual, fully automatic, reel to reel
Mesh count	Meshes of 61 - 120 threads per cm
Substrates	PET, PETE, PETG, PVC, Vinyl, Polyester +
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 3, February 2020

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