TECHINSTRO®
Vision Beyond Technology

Graphene Powder

(Functional Carboxyl)

Product Catalogue

Call Us: +91-8007799090 | +91-9765849656
Website: www.techinstro.com | E-Mail: info@techinstro.com

Address: 463, 2nd Floor, Yadav Nagar, Nagpur, Maharashtra, India. Pin Code : 440026

WorKing

Graphene is ideally only one-atom-thick and formed from hexagonally connected carbon atoms. These share a single electron with three other carbon atoms, leaving one electron free for adequate electrical conductivity. It is black, with a thickness of around 5-10 nanometers and a lateral dimension of 5 to 10 microns. We make a Carboxyl (COOH) functionalized Graphene from Graphene on which further treatment is done to introduce the (COOH) group at the edges and surfaces with extra purity. There are 5 to 10 layers in the research-grade graphene nanopowder.

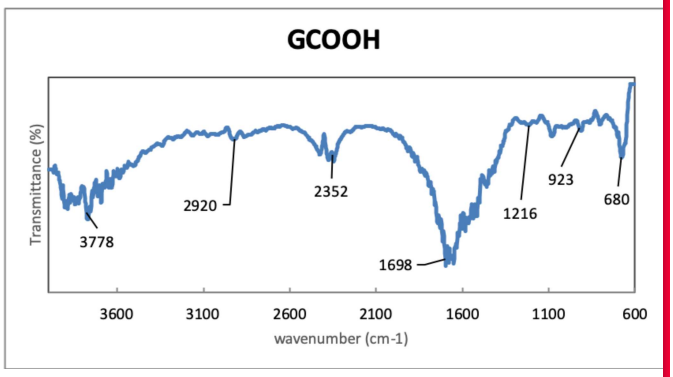
Product Code: Carboxyl-Graphene

Technical Properties:

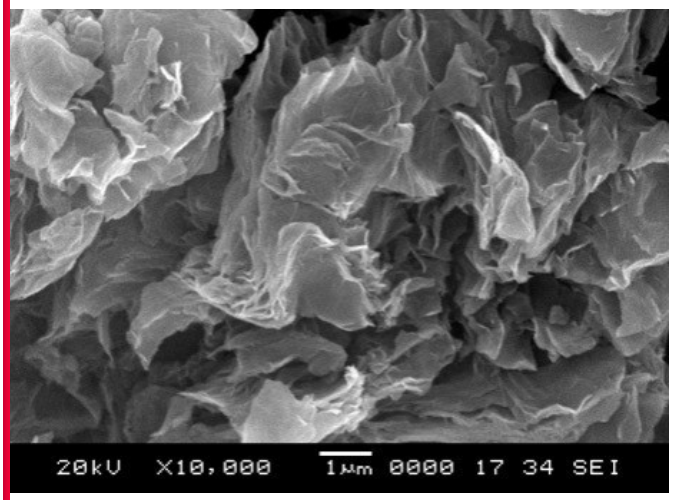
SPECIFICATIONS	*VALUES*
Bulk Density	0.45 g/cm^3
Diameter Average X &Y Dimensions	5-10 μ m
Thickness Average Z Dimension	5 - 10 nm
COOH Ratio	2-5%
Carbon Purity	>99%
Form Factor	Powder
Colour	Black
Number of Layers	Average number of Layer 5 - 10 layers
Surface Area	60-200 m^2/g
Physical Form	Fluffy, Very Light Black Powder
Odour	Odourless
Chemical Formula	C
Cas No.	7782-42-5

Characterization Analysis

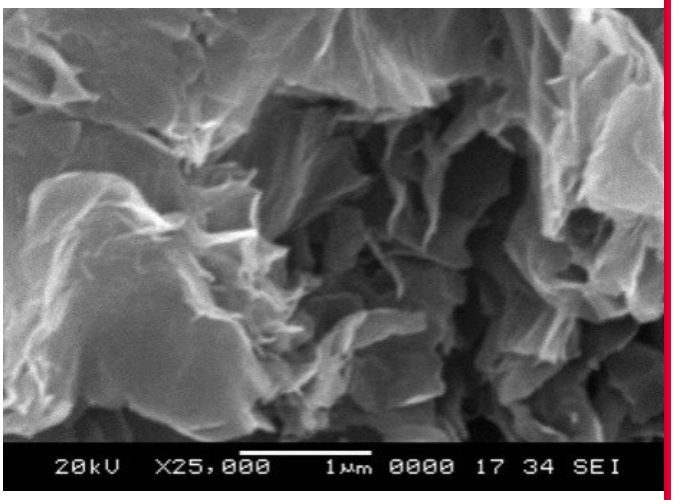
FTIR



SEM



SEM



Applications

- Antibarrier Coating
- Conductive Inks
- EMI Sheild Coating
- Supercapacitors
- RFID Coating
- Improve the properties of polymer such as alkaline
- Improve the properties of the thermoplastic
- Automobile Industries

Features

- Improves electrical conductivity
- Improves thermal conductivity
- Improves mechanical stability
- Dispersed easily
- It is useful in some solvent, polymer system and epoxies
- High purity
- Small Addition will improve the properties of the matrix

Safety Instructions

- Protective gloves should be worn at the time of operation.
- Safety goggle is a must during handling.
- Do not touch any part of the skin or eyes while using.
- Store in a moisture-proof dry place.

Packaging

It is supplied in a highly-protective moisture-proof bottle with a seal. It is finally packed in a shockproof sheet with a corrugated box.

Handling

When handling, the researcher should use powder-free non-latex gloves, which should be held carefully. While experimenting, if the operator uses a nanopowder with bare hands, the chances of contamination due to finger oil are very high. Therefore, it is advised to use nylon or polyester gloves.

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