



Terracarb

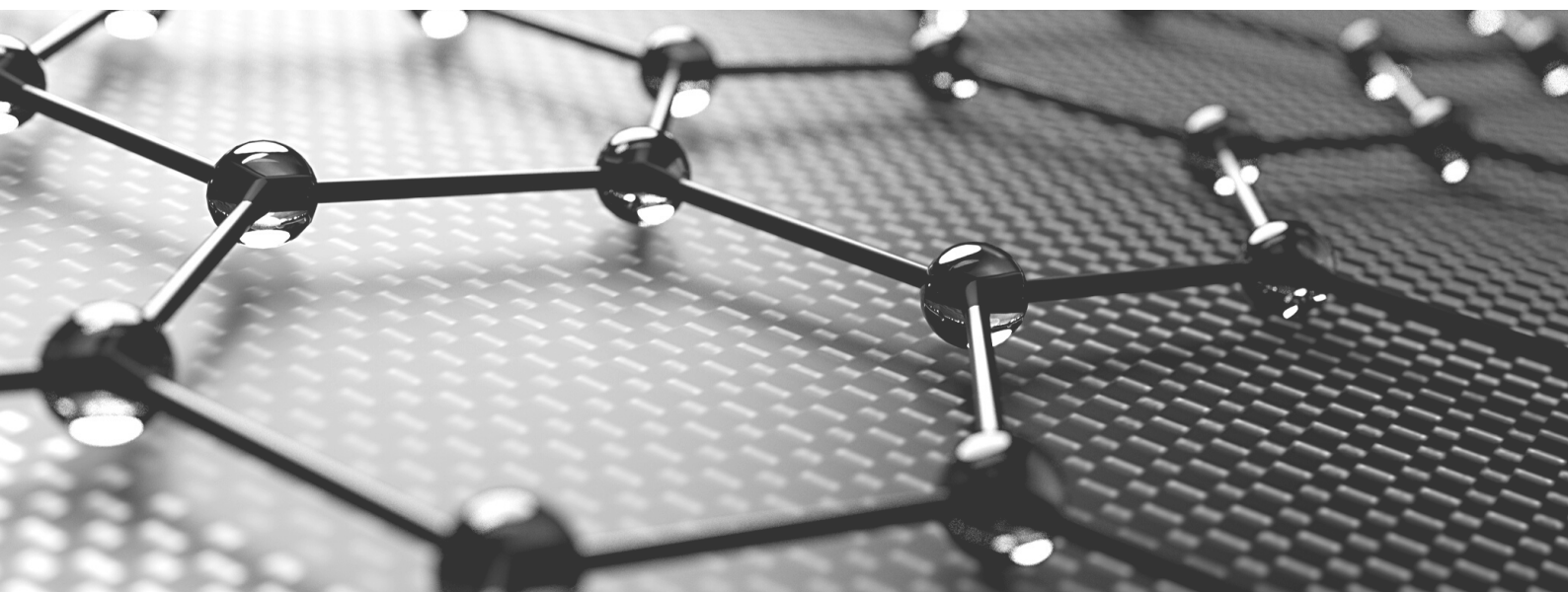
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TECHNICAL DATA SHEET

POLYMER COMPOSITE

Terracarb utilizes highly pure, research-grade, bio-derived chemicals for the production of exfoliated sheets of graphene with high surface area, which can be readily dispersed, in a range of solvent systems and host matrices through extrusion process.



FIELD OF APPLICATION

- Terracarb's polymer grade graphene can be used to manufacture Graphene-polymer composites with improved mechanical, chemical and electrical properties.
- It is compatible with HDPE, PP, PU, PVDF, Natural Rubber, Epoxy as well as engineering polymers such as ABS, PEEK, PET, PI and PA.

TERRACARB PRIVATE LIMITED

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FOURTH FLOOR, J BLOCK, PSG STEP, PSG COLLEGE OF TECHNOLOGY, COIMBATORE, TN 641004



PROPERTIES

PARAMETER	VALUE/SPECIFICATIONS
GRAPHENE TYPE	Composites-grade Graphene
APPEARANCE	Greyish black powder
MANUFACTURING METHOD	Pyrolysis under controlled conditions
BULK DENSITY	0.05 g/cm ³
SPECIFIC SURFACE AREA	1006 m ² /g
CARBON CONTENT	89 – 91%
OXYGEN CONTENT	9 – 11%
DISPERSIBILITY	Soluble in polar aprotic solvents
PURITY	99.99%
METALLIC IMPURITIES	<50 ppm
LATERAL SIZE	5-25 microns



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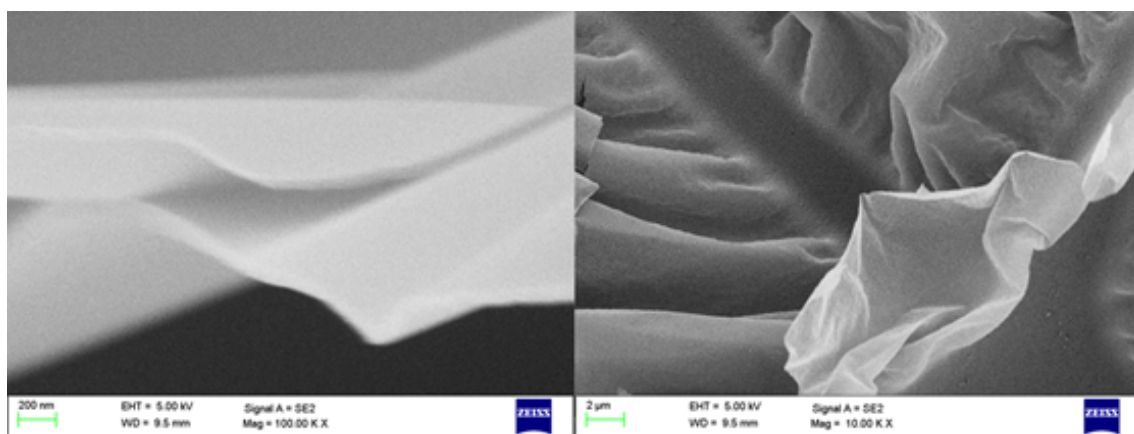
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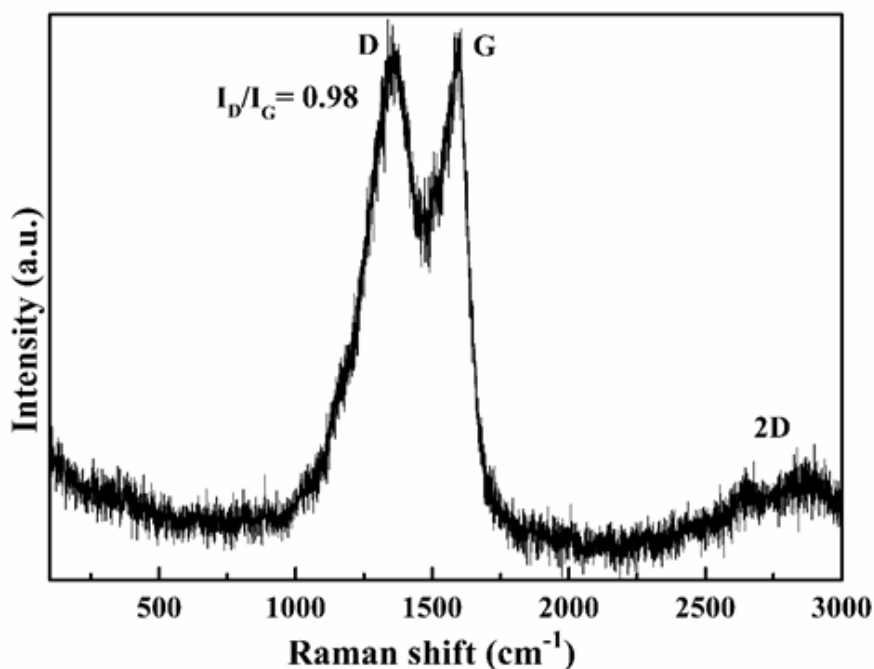


CHARACTERIZATION RESULTS

1) SCANNING ELECTRON MICROSCOPY (SEM)



2) RAMAN SPECTROSCOPY



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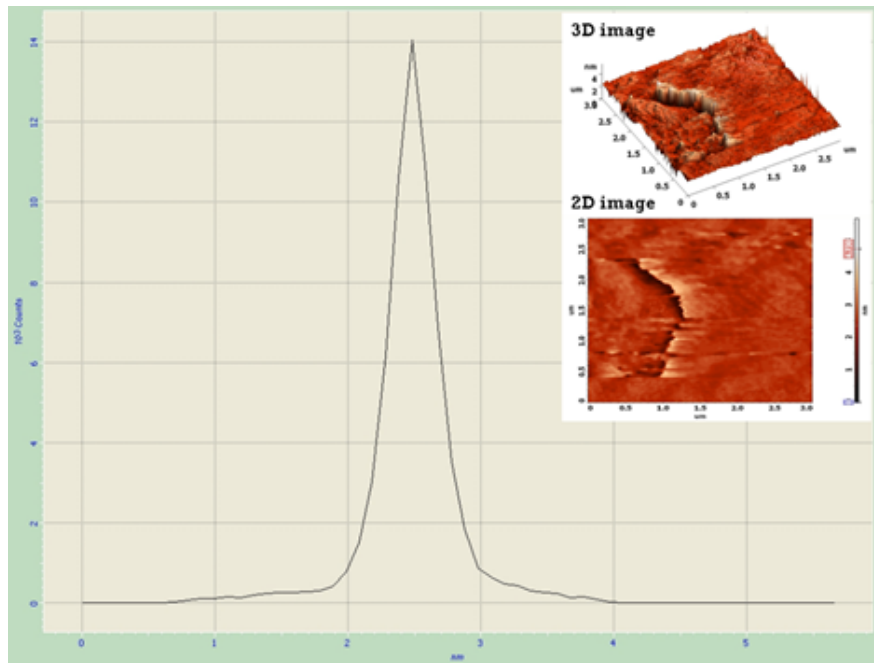


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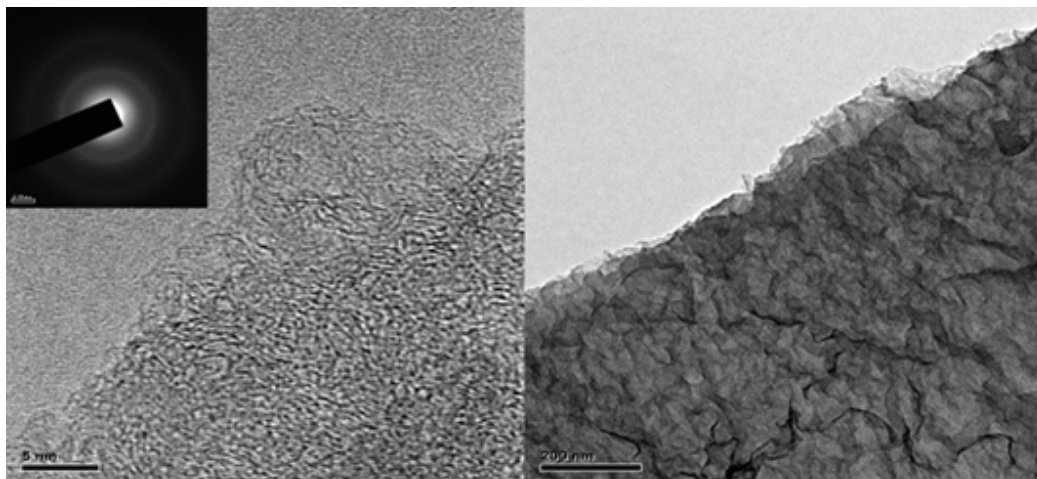
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3) ATOMIC FORCE MICROSCOPY



4) TRANSMISSION ELECTRON MICROSCOPY



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