

Welcome to the world of M-GRAFE



*At M-GRAFE we are committed to the development
of graphene materials and applications.*

MIRACULUM GRAPHENE PRIVATE LIMITED

MIRACULUM GRAPHENE PRIVATE LIMITED identified by the M-GRAFE brand is indulged in the manufacture of high-performing graphene and graphene based materials. It is privately owned, and has commercial and supply company in India. M-Grafe is an emerging high tech material company aiming to become a global leader in bulk graphene.

M-Grafe graphene is easy to use and enhances the properties of customer's products and materials across industries and applications worldwide. The products are natural, chemical-free and sustainably produced. Our production process is designed to meet large supply chain requirements for volume, cost and quality control.

Our company's highly qualified Research and Product Development team is supported by a fully equipped material characterization and test laboratory. Our team has specific expertise in development and formulation of Graphene materials. It is now producing high quality un-oxidized ordered pristine Graphene flakes with different sizes (depending upon customer's requirement). The proven technology is patented.

At M-GRAFE we are passionately working on making this material easily available to the world at competitive rates without compromising its wonder properties.

BOARD OF DIRECTOR

DHAVAL PATEL

Dhaval is a highly respected and experienced businessman with an intimate knowledge of all market related aspects of the mining industry. He has more than 10 years of experience in graphite. He is a computer engineer and has a good experience of handling international clients as he is handling china office to provide all international clients a local platform for the business in china.



NEEL PANCHAL

Mr. Neel is an entrepreneur with a Qualification of bachelors in Mechanical engineering followed by PGDM in business development. Due to his integrity, and innovative nature he is always ready to help incubate new product according to new era. He stands at the forefront of the fastest moving technology industry & trend to understand demonstrated experience in the sphere of nano technology specialized in graphene derivatives.



ROMESH SHAH

Mr. Romesh shah the Executive Chairman of the Company has nearly three decades of experience in the field of Export Import Consultancy, International Logistics, International Sourcing and Trade Business. He is responsible for the overall working of the Company. He takes wide view of the whole system and currently is CEO of a company name under HMSS GROUP from years. He understand that the customer is the single most valuable asset an organization can have.



HETAL PANDYA

MR. Hetal is a qualified mining professional and businessmen with many years experience in the mining and small scale industries and operating graphite plants. He used to own a graphite mine in India and many beneficial plants in Orissa. Though being a Mechanical engineer, he is more indicated towards the expertise in production and understands pulse of the material and knows how to avoid the production glitches.



OUR MISSION

M-Grafe mission is to be one of the world's leading high quality producers and providers of Graphene and its related products and maintaining our uncompromising principles while we grow and to become the Standard of the Graphene industry.



OUR VISION

M-Grafe vision is to drive the future forward with this extraordinary nanomaterial named Graphene, through a fast, highly cost-effective and environmentally friendly proprietary method. To be able to do it, M-Grafe is generating completely customized and integrated Graphene solutions that can be used to optimize targeted goals and manufacturing processes.

OUR VALUES



PROFESSIONALISM :

M-Grafe is the leading manufacturer and supplier of ultra-high performing Graphene materials.



INNOVATION:

We seek out innovative solutions for our customers. We are open to close collaboration with our customers whenever they need ideas.



CREATIVITY:

We developed our own proprietary method (Patented) for making different Graphene derivatives in large quantities with the same consistency in the product.



AUTHENTICITY AND TRUST:

Our company enhances the properties of customers' products and materials around the applications worldwide with honesty and they are easy to use .



EXCELLENCE:

We have established 150 tonne/year Graphene production capacity in India. And provide customized technology development solution for any engineered product.

GRAPHENE OXIDE

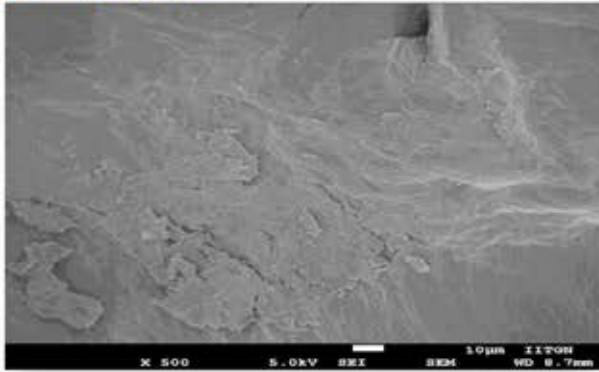
Graphene oxide refers to single-atom layers of carbon (otherwise known as graphene) with functional groups containing oxygen attached to both the sides and area of the flake. It is obtained by treating graphite with oxidizers, and results in a compound of carbon, oxygen, and hydrogen in variable ratios.

General Description

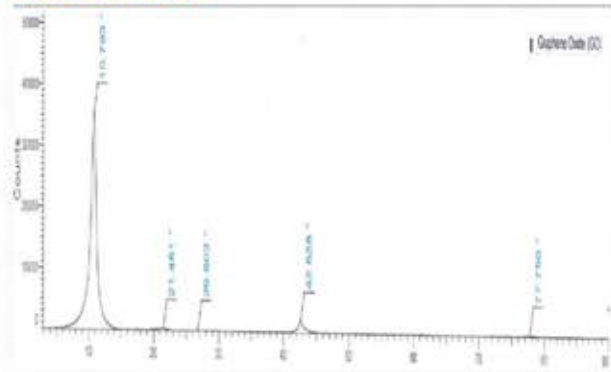
Form	Dark brown / Black powder
Oxygen Content	41-50 %
Carbon Content	49.56 %
Hydrogen	0-1 %
Bulk density	1.8 g/cc
Solubility	Dispersible in Water or Polar Solvents
Number of layers	~10 layers

NOTE: The properties of the product can be customized according to the Requirements.

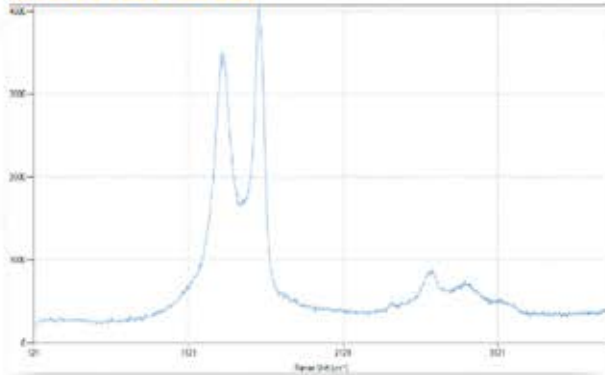
SEM TEST IMAGE



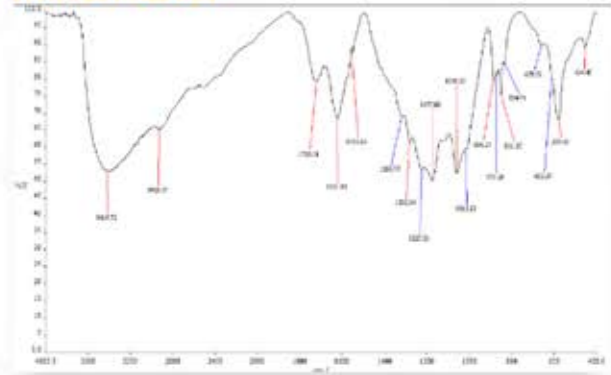
XRD TEST RESULT



RAMAN TEST RESULT



FITR TEST RESULT



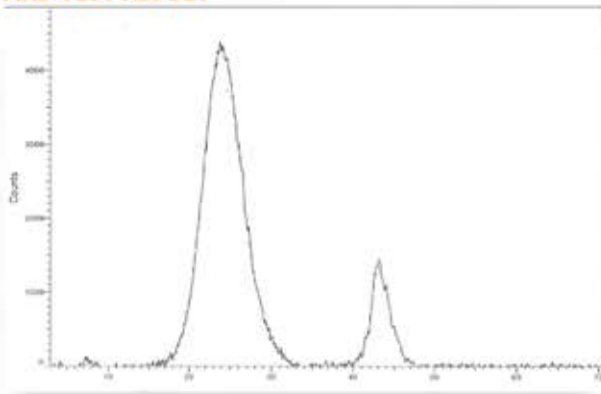
REDUCED GRAPHENE OXIDE

Reduced graphene oxide can be tuned by varying the degree of reduction, either by using thermal reduction or various forms of chemical reduction. Thermal reduction typically produces a higher degree of reduction than chemical processes, giving higher electrical conductivity.

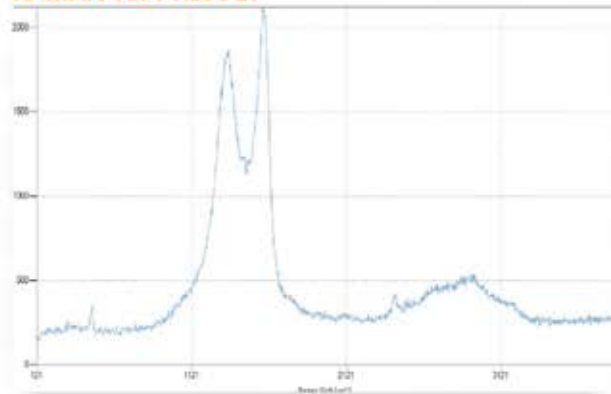
GENERAL DESCRIPTION	
Form	Fluffy Black powder
Oxygen Content	< 20%
Carbon Content	>80 %
Nitrogen	> 2 %
BET Surface Area	450 - 700m ² /gm.
Bulk Density	0.02g/cc
Solubility	Water : Insoluble , Polar Solvents Soluble
Number of layers	2-12 Layers
Method	Hydrothermal

NOTE: The properties of the product can be customized according to the Requirements.

XRD TEST RESULT



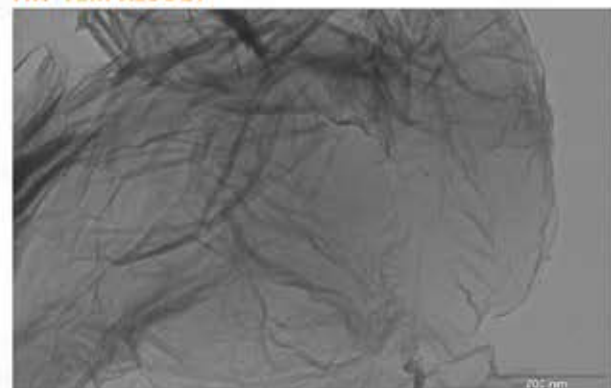
RAMAN TEST RESULT



HR-TEM RESULT



HR-TEM RESULT



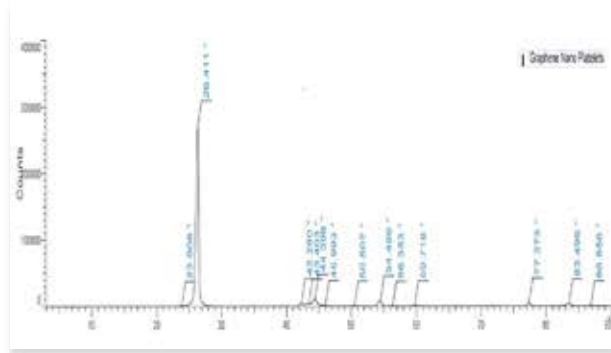
GRAPHENE NANO PLATLETS

Reduced graphene oxide can be tuned by varying the degree of reduction, either by using thermal reduction or various forms of chemical reduction. Thermal reduction typically produces a higher degree of reduction than chemical processes, giving higher electrical conductivity.

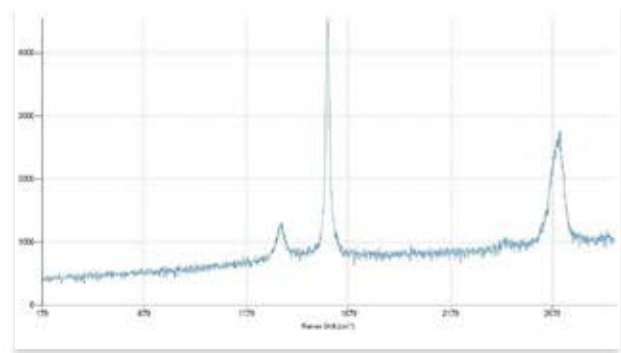
GENERAL DESCRIPTION	
Form	Black powder
Carbon Content	99%
Surface area	20 - 250 m ² /gm
Bulk density	2g/cc
Lateral Dimension	0.5 - 5micron
Number of layers	3-7 layers

NOTE: The properties of the product can be customized according to the Requirements.

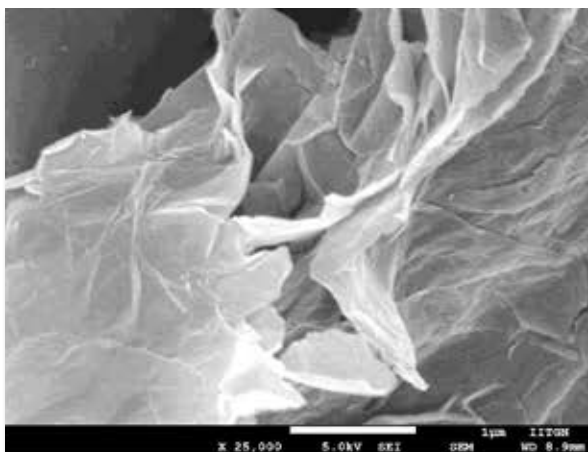
XRD TEST RESULT



RAMAN TEST RESULT



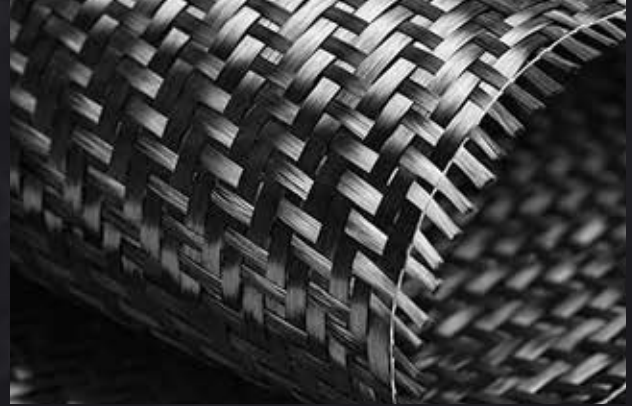
SEM TEST IMAGE



APPLICATIONS



CONDUCTIVE INK & PAINTS



COMPOSITES



WATER PURIFICATION



CONCRETE



ENERGY STORAGE



TEXTILE FIBERS



MIRACULUM Graphene



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