



# RAIL UDYOG

Manufacturer & Exporter of  
**Graphene Oxide (GO) & Reduced Graphene Oxide (rGO)**

## Graphene

### Introduction

Graphene is a single-atomic-layer, 2-dimensional crystalline allotrope of carbon atoms that form a hexagonal lattice structure with an sp<sup>2</sup> hybridization. It has superlative properties of strength, elasticity, electrical conductivity, and thermal conductivity.

Graphene has earned the title of The Wonder Material because of its versatile properties. It is proving to be a performance enhancer in applications like electronics, composites, paints, water filtration, energy storage, bio-medical and many more.

Graphene is potentially a sustainable solution for an almost limitless number of applications.

Transforming waste into innovation — our Graphene Oxide is made from waste plastic through a ground breaking, eco-friendly process.

Application area includes :

• <b>Energy</b>	• <b>Optical Engineering</b>
• <b>Nano Bio-Technology</b>	• <b>Defence &amp; Securities</b>
• <b>Nano Devices</b>	• <b>Nano Fabrics</b>
• <b>Medicines &amp; Drugs</b>	• <b>Cosmetics</b>
• <b>Paints &amp; Polymers</b>	• <b>Concretes</b>



# RAIL UDYOG

Manufacturer & Exporter of  
Graphene Oxide (GO) & Reduced Graphene Oxide (rGO)

## Technical Datasheet (TDS)

### GRAPHENE OXIDE (GO)

CHARACTERISTICS	OBSERVATIONS
Appearance (Color)	Black
Appearance (Form)	Powder
Odour	Odourless
Solubility	Insoluble but dispersed in water and organic solvents.
Particle Size	2 - 7 $\mu\text{m}$
Purity	99.4 - 99.8 %
Country of Origin	Made in India
Bulk Density	0.48 $\text{g/cm}^3$
Number of layers	2 - 5 Layers
Thickness	3 - 5 nm
<b>Made From</b>	<b>Waste Plastic</b>

### Element Analysis

ELEMENT	WT. %
Carbon	73.0 - 77.5 %
Oxygen	21.5 - 26.0 %
Trace Impurities	0 - 1 %