

# Borhan Nano Scale Innovators Knowledge-Based Co.

## Graphene Oxide (GO) Nanosheets

#### Introduction

GO is a unique material that is a single monomolecular layer of graphite with various oxygen containing functionalities such as epoxide, carbonyl, carboxyl and hydroxyl groups. GO is the solution processable precursor for bulk production of graphene based materials and devices. GO is amphiphillic in nature and it also forms highly stable emulsions of organic solvents.

### **Specifications**

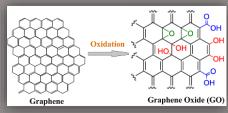
Chemical composition	$C_xO_yH_z$
Morphology	Sheet
Thickness (nm)	Less then 2
Length (μm)	1-5
Color	Brown/Black
Form	Flakes
Product No.	763713

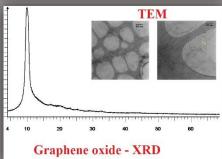
#### **Applications**

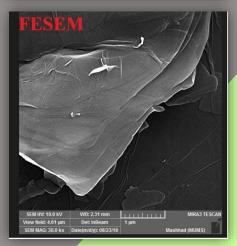
- Microwave absorbing material
- Drug and gene delivery systems
- Tissue engineering
- Energy storage (lithium ion batteries, Supercapacitors)
- Composite materials
- Field effect transistors
- Electronics (Transparent electrode, Hole transport layer in polymer solar cells and LEDs, Dye-sensitized solar cells and organic solar cells)
- Biosensors (electrochemical and optical)
- Water purification

#### **Advantages**

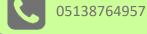
- High current density
- Ballistic transport (highest electron transfer rate)
- Very high electron mobility at room temperature
- High thermal conductivity
- Extraordinary light transmission
- Hydrophobicity













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