

Graphene & Graphene Oxide

JMC Graphene & Graphene Oxide Introduction

JMC Core Technology

- >> Reaction : Control of exothermic reaction (using strong oxidants)
- >> Product : Lateral size control, high C/O ratio (low oxygen content) of rGO
- >> Application : HVDC cable, battery, radiation shielding, light-weight materials, etc.

Graphene & Graphene Oxide

JMC Graphene & Graphene Oxide Specifications

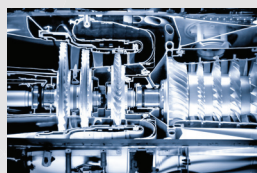
Graphene Oxide

Subject	Unit	Spec.	Standard Sample	Test Method
Concentration	(%)	1.0% or 0.5%	1.0, 0.5	
Carbon contents	(%)	45 - 55%	49.50	EA
Oxygen contents	(%)	40 - 55%	49.20	EA
XRD 2θ value	(°)	9.5 - 10	9.80	XRD
Particle Size	µm	Selectable Size	1~10 µm , 15~25 µm 35 -45 µm, < 80 µm etc.	PSA

Graphene (rGO)

Subject	Unit	Spec.	Standard Sample	Test Method
Carbon contents	(%)	Min 98.0 %	98.92	EA
Oxygen contents	(%)	Max 2.0 %	1.08	EA

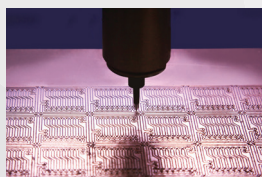
Composites



Displays



Conductive Inks



Energy Electrodes



Biotech and Cosmetics



Heat Management



Graphene & Graphene Oxide

JMC Graphene & Graphene Oxide Introduction

JMC's graphene and graphene oxide technology stems from our long history as a world-class chemical manufacturer. JMC manufactures the world's highest quality saccharin. We produce saccharin on a large scale using a completely vertically integrated process where we use sulfuric acid as an oxidising agent and our own raw materials. JMC's graphene oxide production begins with graphite and utilises the expertise that we have developed over the past 65 years.

JMC has developed processes to overcome some of the problems associated with the production of graphene oxide on a large scale. In particular, we have applied our expertise in quality assurance with a focus on controlling the lateral size of graphene oxide. This enables us to tune the graphene oxide properties to meet the requirements of a variety of applications. JMC also has extensive, large-scale waste water treatment facilities that enable us to scale the production of graphene oxide while complying with South Korea's strict safety and environmental regulations.

JMC is now positioned to sustainably produce graphene and graphene oxide on a large scale and is looking for partners to supply this material to.



JMC

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