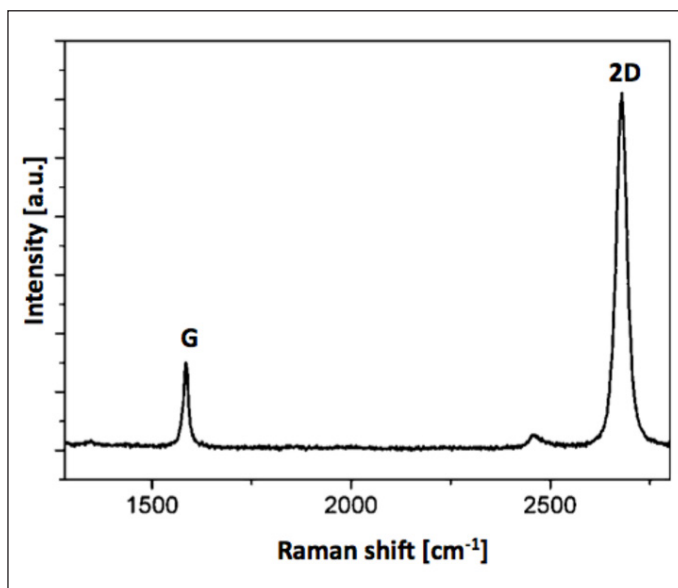


Monolayer Graphene Film on Various Substrates

Item#	Description	Unit Sizes
06-2510	Monolayer Graphene on Cu (10 mm x 10 mm)	4 piece unit
06-2518	Monolayer Graphene on Cu (60 mm x 40 mm)	1 piece unit
06-2523	Monolayer Graphene on Cu with PMMA coating (60mm x 40mm)	1 piece unit
06-2534	Monolayer Graphene on SiO ₂ /Si (10mm x 10mm)	4 piece unit

Graphene Film Product Details

Growth Method:	CVD synthesis
Transfer Method:	Clean transfer method
Color and Form:	Transparent Film
Transparency:	>97%
Coverage:	>95%
Thickness:	0.345 nm
Number of Graphene layers:	1
Grain Size:	Up to 10 μm
Field Effect Mobility on SiO ₂ /Si:	2000 cm ² /V·s
Hall Effect Mobility on SiO ₂ /Si:	4000 cm ² /V·s



Substrates

SiO ₂ /Si	
Type/Dopant	P/Bor
Orientation	<100>
Growth Method	CZ
Resistivity	<0.005 ohm cm
Thickness	525 +/- 20 μm
Front Surface	polished
Back Surface	etched
Flats	2 SEMI
Coating	300 nm thermal oxide on BOTH wafer sides
Cu Foil	
Thickness	18 μm

Applications

Flexible batteries, Electronics, Aerospace industry, MEMS and NEMS, Microactuators, Conductive coatings, Research

Visit www.strem.com for new product information and a searchable catalog.

Strem Chemicals, Inc.
7 Mulliken Way
Newburyport, MA 01950
U.S.A
Tel: 978.499.1600
Fax: 978.465.3104
Email: info@strem.com

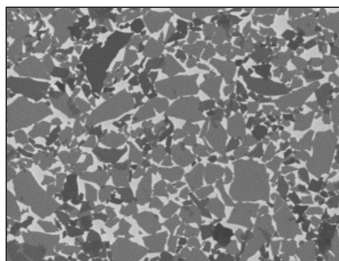
Strem Chemicals, Inc.
15, rue de l'Atome
Zone Industrielle
67800 BISCHHEIM France
Tel: (33) 03 88 62 52 60
Fax: (33) 03 88 62 26 81
Email: info.europe@strem.com

Strem Chemicals, Inc.
Postfach 1215
77672 KEHL
Germany
Tel: 0 78 51/ 7 58 79
Email: info.europe@strem.com

Strem Chemicals UK Ltd.
An Independent Distributor of Strem Chemicals Products
Newton Hall, Town Street
Newton, Cambridge
England, CB22 7ZE
Tel: 0845 643 7263
Fax: 0845 643 7362
Email: enquiries@strem.co.uk

Graphene Oxide

Item#	Description	Unit Sizes
06-2545	Graphene oxide (4mg/ml water dispersion)	50ml and 250ml



10µm

Properties

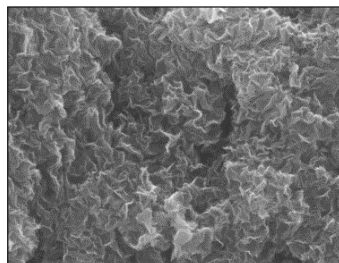
Color:	Yellow-brown
Form:	Dispersion of graphene oxide sheets
Odor:	Odorless
Sheet Dimension:	Variable
Dispersibility:	Polar solvents
Solvents:	Water
Concentration:	4 mg/ml
pH:	2.2-2.5
Monolayer content: (measured in 0.5mg/ml)	>95%*

*4mg/ml concentration tends to agglomerate the GO flakes and dilution followed by slight sonication is required in order to obtain a higher percentage of monolayer flakes

Applications

Graphene/polymer composite materials, Batteries, Biomedical, Solar cells, Supercapacitors, Support for metallic catalysts, Low permeability materials, Biosensors, Multifunctional materials, Graphene research

Item#	Description	Unit Sizes
06-2550	Graphene oxide, reduced	250mg and 1g



Properties

Color and form:	Black pwdr.
Reduction method:	Chemically reduced
Odor:	Odorless
Sheet Dimension:	Variable
Solubility:	Insoluble
Dispersibility:	low concentrations (<0.1mg/ml) in NMP, DMSO, DMF
Electrical Conductivity:	> 600 S/m
BET surface area:	422.69-499.85 m ² /g
Particle size (z-sizer in NMP at 0.1 mg/ml):	260-295nm
Density:	1.91 g/cm ³

Applications

Biomedical, Batteries, Printable graphene electronics, Supercapacitors, Graphene research.

Visit www.strem.com for new product information and a searchable catalog.

Strem Chemicals, Inc.
7 Mulliken Way
Newburyport, MA 01950
U.S.A
Tel: 978.499.1600
Fax: 978.465.3104
Email: info@strem.com

Strem Chemicals, Inc.
15, rue de l'Atome
Zone Industrielle
67800 BISCHHEIM France
Tel: (33) 03 88 62 52 60
Fax: (33) 03 88 62 26 81
Email: info.europe@strem.com

Strem Chemicals, Inc.
Postfach 1215
77672 KEHL
Germany
Tel: 0 78 51/ 7 58 79
Email: info.europe@strem.com

Strem Chemicals UK Ltd.
An Independent Distributor of Strem Chemicals Products
Newton Hall, Town Street
Newton, Cambridge
England CB22 7ZE
Tel: 0845 643 7263
Fax: 0845 643 7362
Email: enquiries@strem.co.uk