

# HRGO – Highly Reduced Graphene Oxide

## DATASHEET



Advanced Graphene Products

SKU: XGA-HRGO  
Last update: 05.2018

Graphene flakes with a very low oxidation level. The material does not require additional cleaning.

<b>OXYGEN CONTENT</b>	1-2% (dehydrated sample)
<b>CHEMICAL COMPOSITION</b> (non-oxygen)	Carbon: >99.8% Silicon: <40 ppm Phosphorus: <200 ppm Sulfur: <60 ppm Potassium: <5 ppm Calcium: <30 ppm Chromium: <125 ppm Manganese: <10 ppm Iron: <900 ppm Nickel: <20 ppm Cooper: <5 ppm Zinc: <2 ppm
<b>FLAKES SIZE</b>	Under standard conditions, flake size analysis (DLS - dynamic light scattering) represents a Gaussian distribution with an average flake size of 500 nm.  90% of the flakes have a diameter smaller than 800nm.
<b>NUMER OF LAYERS (n)</b>	<10 (95% of a material)
<b>COLOR</b>	Black
<b>ODOR</b>	Odorless

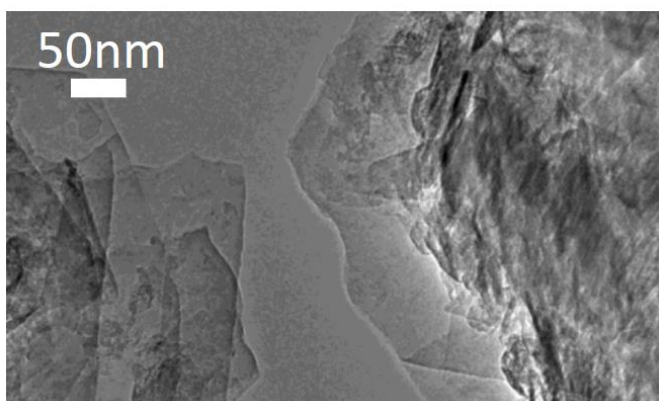
## PREPARATION OF DISPERSIONS

The dispersion quality depends on the oxidation level and the specifics of the material in which the dispersion is made. Optimal materials for dispersion should be characterized by polarity or hydrophilicity. Sonication is recommended for improving the degree of dispersion.

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### SEM

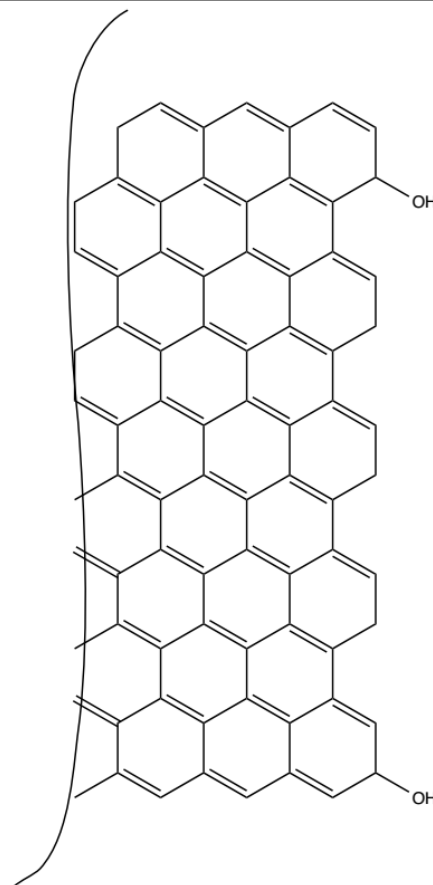
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### STRUCTURE

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Schematic representation of the HRGO graphene structure.

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## ADDITIONAL INFORMATION

Standard graphene flakes (oxides or reduced oxides) are in a powder form. AGP offers a wide range of flake graphene with different parameters and in various forms (powder, water dispersion, pastes, etc.). Our innovative approach involves a synthesizing of customized graphene materials. In order to determine the possibility of preparing an individual product or in case of any questions, please contact our Sales Department directly at [sales@agp-corp.com](mailto:sales@agp-corp.com).

