

# TECHNICAL DATA SHEET

## Sixonia Tech E-Graphene Dispersion G-DISP-H2O-CSO-2

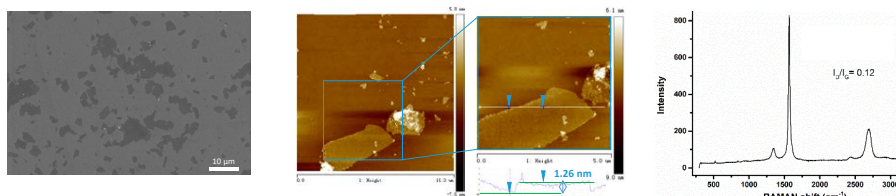
### Description

Sixonia Tech's E-Graphene Dispersion G-DISP-H2O-CSO-2 is a dispersion of functionalized, electrochemically exfoliated graphene in water at a concentration of 2 mg/ml without surfactants or other additives. E-Graphene CSO is a few-layer graphene with large lateral size, low level of in-plane-defects and high conductivity, stabilized in dispersion via negative surface charges.

### Properties

<b>Form</b>	Few-layer graphene dispersion
<b>Colour</b>	black
<b>Odour</b>	odourless
<b>Solvent</b>	water
<b>Graphene Concentr.</b>	≤ 0.2 wt.-% (≤ 2 mg/ml) (gravimetric)
<b>Additives/Binders</b>	0 wt.-% (0 mg/ml) (not used/needed)
<b>Average lateral size</b>	1-2 μm (from SEM & AFM)
<b>Average thickness</b>	1-5 atomic layers (from AFM)
<b>pH</b>	3-4 (adjustable on demand)
<b>Zeta Potential</b>	-35 mV @ pH 3 to -60 mV @ pH 10
<b>Conductivity (bulk)</b>	> 400 S/cm (4-Point-Probe & SEM on
<b>Resistivity (bulk)</b>	< 2.5·10 <sup>-3</sup> Ωcm as-made film, no post-treat-
<b>Sheet resistance</b>	< 1 Ω/□ @ 25μm ment needed)
<b>Raman D/G-ratio</b>	0.1-0.2* (from Raman)*
<b>C/O ratio</b>	~20 (from XPS)

### Characterization



\*: Raman D/G-ratio measured on large single flake level, averaging over large area or bulk film may give different ratio.