



TECHNICAL DATA SHEET

Nanum® Graphene Oxide

NE352003

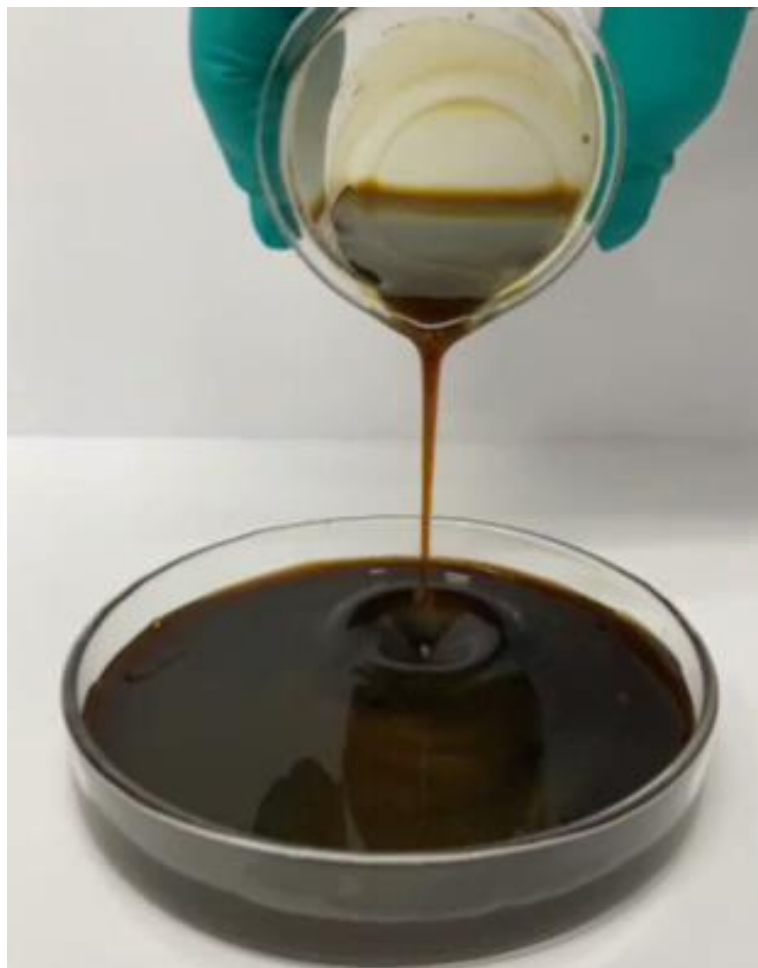
Description

Nanum® Graphene Oxide NE352003 is a premium-quality aqueous solution containing uniformly dispersed graphene oxide nanoparticles. Engineered using state-of-the-art purification and dispersion techniques, our dispersion offers exceptional stability and homogeneity, making it ideal for a wide range of industrial applications. Graphene Oxide dispersion delivers outstanding performance and reliability for enhancing the mechanical properties of composites, improving the conductivity of coatings, or exploring novel anticorrosive applications.

Application

In paints and coatings, Graphene Oxide serves as a valuable additive due to its excellent dispersibility and compatibility with different paint formulations, enhancing mechanical strength, corrosion resistance, and barrier properties. Its catalytic activity can facilitate reactions within the paint matrix, leading to improved curing and film formation.

Suitable for a variety of applications including conductive inks, coatings, composites, energy storage devices, and anticorrosive applications.



Properties:

- **Dispersion vehicle:** Aqueous
- **Dispersion Concentration (g/L):** 10
- **Physical form:** Brown liquid
- **Average lateral size (µm):** 10 – 30
- **Average thickness (nm):** 1 – 5
- **Average layers number:** 1 – 5
- **Viscosity (cP)*:** 1000 – 2000
- **Surface tension (dyne/cm):** 70
- **pH:** 3.0 – 5.0
- **Specific gravity (g/cm³):** 0.96 - 0.98
- **Conductivity (µS/cm):** 1600 - 2400

* Brookfield Viscometer DV-I Prime - Spindle S61
(Frequency = 3 revolutions per minute (rpm))



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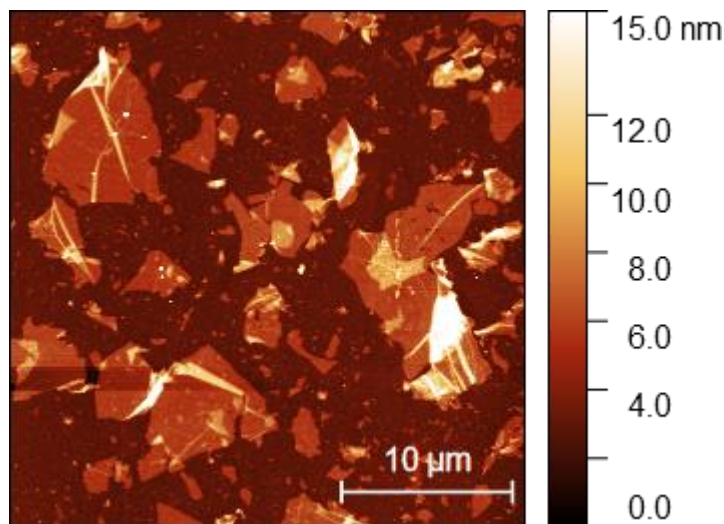


Shelf life

NE352003 should be stored in a cool dry place protected by light with optimal temperature range for storage between 41 °F - 95 °F (5°C - 35 °C). This product has a shelf life of 1 year from the manufacture date when stored under the mentioned conditions. Exposing the dispersion to higher or lower temperatures may cause loss of its properties and performance.

Dispersion Volume

Custom volume upon client request.



Atomic Force Microscopy image of the Graphene Oxide nanoflakes

Notes

This Graphene Oxide dispersion is produced according to a certified ISO 9001:2015 Quality Management System and NANUM warrants all reported specifications. However, satisfactory results from the dispersion use are related to individual formulation and operational procedures. Users are responsible for testing and to determine if our product will perform as expected. All analyses were performed at a temperature of 25°C (77 °F). Characterization tests carried out based on ISO 21356 guidelines.

