

SECTION 1: PRODUCT & COMPANY IDENTIFICATION

1.1 Product Identifiers

NEI Product ID: NANOMYTE® FGA-1AD

Product Description: Graphene dispersion in Water

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified Uses: Laboratory chemicals, research & development

1.3 Details of the Supplier of the Safety Data Sheet

Company: [NEI Corporation](#)

Address: 400 Apgar Drive, Unit E – Somerset, NJ 08873 – United States of America

Phone: +1 (732) 868-3141

Fax: +1 (732) 868-3143

Email: productinfo@neicorporation.com

1.4 Emergency Telephone Number

Supplier: +1 (732) 868-3142 (9am to 6pm EST / UTC -0500)

U.S. Poison Control Center: +1-800-222-1222

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Not a hazardous substance or mixture

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Component Name	Synonyms	Formula	CAS #	Weight %
Water	n/a	H ₂ O	7732-18-5	> 92%
Graphene	Carbon, graphite	C	7782-42-5	7%
Polyvinylpyrrolidone	PVP, Polyvidone, Povidone	(C ₆ H ₉ NO) _n	9003-39-8	< 1%

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice:

Consult a physician if irritation occurs or if feeling unwell after exposure. Show this SDS to the doctor in attendance.

After Inhalation:

If inhaled, move the person into fresh air. If not breathing, give artificial respiration and get medical attention.

After Skin Contact:

Wash off with soap and plenty of water. Get medical attention if irritation occurs.

After Eye Contact:

Flush eyes with water as a precaution. Get medical attention if irritation occurs.

After Swallowing:

If conscious, rinse mouth with water. Get medical attention if symptoms occur.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or section 11.

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4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

No Data Available

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media: Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam

Unsuitable Extinguishing Media: No limitations of extinguishing agents are given for this material

5.2 Special Hazards Arising from the Substance or Mixture

Thermal decomposition can lead to release of irritating gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for Firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Other Information

No Data Available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid inhalation of dusts. Evacuate dangerous area, observe emergency procedures, consult an expert.

6.2 Environmental Precautions

Material should not be released into the environment. Do not let product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to Other Sections

For safe handling, see Section 7; for personal protection, see Section 8; for disposal, see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Wear personal protective equipment/face protection. Avoid ingestion and inhalation. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for Safe Storage (including any incompatibilities)

Keep container tightly closed in a well-ventilated place.

7.3 Specific End Uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

Components with workplace control parameters:

Component	ACGIH TLV	OSHA PEL	NIOSH
Graphene	TWA: 2 mg/m ³	TWA: 15 mg/m ³ TWA: 5 mg/m ³	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: National Institute for Occupational Safety and Health

8.2 Exposure Controls

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Change any contaminated clothing and wash hands after working with substance.

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Personal Protective Equipment

Eye / Face Protection:

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection:

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory Protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure

Material should not be released into the environment. Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

Appearance/Form:	Black Liquid
Odor:	Odorless
Odor Threshold:	No Data Available
pH:	No Data Available
Melting Point / Range:	No Data Available
Boiling Point / Range:	No Data Available
Flash Point:	No Data Available
Evaporation Rate:	No Data Available
Flammability:	No Data Available
Upper Explosion Limit:	No Data Available
Lower Explosion Limit:	No Data Available
Vapor Pressure:	No Data Available
Density:	No Data Available
Relative Density:	No Data Available
Water Solubility:	No Data Available
Auto-ignition Temperature:	No Data Available
Decomposition Temperature:	No Data Available
Viscosity:	No Data Available
Explosive Properties:	No Data Available

9.2 Other Safety Information

None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No Data Available

10.2 Chemical Stability

Stable under ambient conditions (room temperature).

10.3 Possibility of Hazardous Reactions

No Data Available

10.4 Conditions to Avoid

No Data Available

10.5 Incompatible Materials

No Data Available

10.6 Hazardous Decomposition Products

Other Decomposition Products: No Data Available (in the event of fire: see Section 5)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50
Graphene	> 2,000 mg/kg (rat, female)	No Data Available	2,000 mg/m ³ - dust/mist (rat, male & female, 4hrs)

Skin corrosion/irritation

No skin irritation (rabbit, OECD Test Guideline 404)

Serious eye damage/eye irritation

No eye irritation (rabbit, OECD Test Guideline 405)

Respiratory or skin sensitization

Negative (Mouse - Did not cause sensitization on laboratory animals; OECD Test Guideline 429))

Germ cell mutagenicity

Negative (Ames Test, OECD Test Guideline 471)

Carcinogenicity

No component of this product, present at levels greater than or equal to 0.1%, is identified as a probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity

No Data Available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No Data Available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No Data Available

Aspiration hazard

No Data Available

Additional Information

To the best of our knowledge, the chemical, physical, & toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Component	Algae (OECD 201)	Freshwater Fish (OECD 203)	Daphnia (OECD 202)
Graphene	100 mg/l – 72 hours Pseudokirchneriella subcapitata	100 mg/l – 96 hours Danio rerio (zebra fish)	100 mg/l – 48 hours Daphnia magna (Water flea)

12.2 Persistence and Degradability

No Data Available

12.3 Bioaccumulative Potential

No Data Available

12.4 Mobility in Soil

No Data Available

12.5 PBT and vPvB Assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other Adverse Effects

No Data Available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods – Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste.

13.2 Waste Treatment Methods – Contaminated Packaging

Handle uncleaned containers like the product itself.

SECTION 14: TRANSPORT INFORMATION

14.1 Department of Transportation (DOT - US)

Not dangerous goods

14.2 International Maritime Dangerous Goods (IMDG)

Not dangerous goods

14.3 International Air Transport Association (IATA)

Not dangerous goods

14.4 Additional Transport Information

Not classified as dangerous in the meaning of transport regulations.

HS Code: 3801.20 | **Schedule B:** 3801.20.0000

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA hazards

Right to Know Components

<u>Component</u>	<u>CAS #</u>	<u>List Citations</u>
Graphene	7782-42-5	MA, PA Right to Know

CALIFORNIA PROPOSITION 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Toxic Substances Control Act (TSCA) Chemical Substance Inventory

Graphene (CAS #7782-42-5)

15.2 Chemical Safety Assessment

A chemical safety assessment was not carried out for this product.

SECTION 16: OTHER INFORMATION

Further Information

NEI has attempted to provide current and accurate information to the best of its knowledge. NEI makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

- END OF MSDS -