



Safety Data Sheet

Pursuant to regulations (EC) no 1907/2006, (ES) 1272/2008, (EU) 830/2015
Release date: 29/09/2022 Version: 1.0 Revision number: 0

SECTION 1: Identification

1.1. Product Identifier

Product Form : Carbon based material dispersed in water
Product Name : **Graphene acid (carboxylated graphene)**

1.2. Intended Use of the Product

1.2.1. Recommended use of the chemicals

Use of the substance/mixture : Biocompatible carboxylated graphene-based material for application in biosensing, catalysis and separation techniques

1.2.2. Restrictions on use

Not specified

1.3. Name, Address, and Telephone of the Responsible Party/Company

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SECTION 2 : Hazards Identification

2.1. Classification of the Substance or Mixture (GHS-US Classification)

Not a hazardous substance or mixture according to Regulation
(EC) No. 1272/2008

2.2. Label Elements (GHS-US Labeling)

Not a hazardous substance or mixture according to Regulation
(EC) No. 1272/2008

2.3. Other Hazards

This substance / mixture does not contain components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/Information on Ingredients

3.1. Substance

Not applicable

3.2. Mixture

Not applicable



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SECTION 4: First-aid Measures

4.1. Description of First-aid Measures

Description of First-aid Measures	: Under normal conditions (in normal use), immediate medical attention is not required. In all cases of doubt, or when feeling unwell, seek medical advice and show this safety data sheet to the physician.
First aid by inhalation	: Immediately discontinue exposure, remove to fresh air, protect from cold, and seek medical attention if irritation, dyspnoea, or other symptoms persist.
First aid in contact with skin	: Take off contaminated clothing, wash the affected area with plenty of lukewarm water if possible, if there is no skin injury, soap, soap solution or shampoo can be used. Get medical attention if skin irritation persists. After washing, treat with a suitable repair cream.
First aid in case of eye contact	: Immediately flush eyes with running water, keep eyelids open (even forcibly); if the affected person has contact lenses, remove them immediately. Rinse for at least 10 minutes. Get medical attention if possible.
First aid if swallowed	: DO NOT INDUCE VOMITING. Rinse mouth with water. Get medical attention for a person with health problems.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/effects on skin contact	: Data not available.
Symptoms/effects after eye contact	: Data not available.
Symptoms/effects by inhalation	: Data not available.
Symptoms/effects if swallowed	: Data not available.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Data not available.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Unsuitable extinguishingmedia	For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special Hazards Arising From the Substance or Mixture

In case of fire, hazardous decomposition products : Nature of decomposition products not known.
should be produced

5.3. Advice for Firefighters

Fire-fighting measures : Wear self-contained breathing apparatus for firefighting if necessary.



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SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2. Environmental Precautions

Do not let product enter drains.

6.3. Methods and Materials for Containment and Cleaning Up

Pick up and arrange disposal without creating dust.

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to Other Sections

If you use personal protective equipment, follow the recommendations in section 8.

Dispose of collected material in accordance with local regulations - see section 13.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : Follow basic hygiene and safety rules for work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage conditions : Store in original packaging in cool, dry, dark and well-ventilated warehouses. Keep tightly closed.

Incompatible materials : Strong oxidizing agent, strong reducing devices, strong base, strong acid.

Storage temperature : 4-8°C

7.3. Specific End Use(s)

Part of the uses mentioned in section 1.2. The other uses are not reserved.

SECTION 8: Exposure Controles/Personal Protections

8.1. Control Parameters

Folders with parameters for workplace control:

It does not contain any substances with occupational exposure limit values.

8.2. Exposure Controls

Appropriate technical inspections:

Observe the usual health protection measures.

Hand protection:

Wear protective gloves. Gloves should be inspected prior to use. Use proper glove removal technique without touching the outer surface of the gloves to prevent skin contact with this product. Dispose of contaminated gloves after in accordance with applicable law and good laboratory practices. Wash and dry your hands.

The selected protective gloves have to satisfy the specifications of EU Regulation 2016/425 and the standard EN 374 derived from it.



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Eye protection:

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection:

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection:

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure:

Do not let product enter drains.

SECTION 9: Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

State	: Dispersion in water
Color	: Black
Odour	: Data not available
Odour threshold	: Data not available
pH	: Data not available
Relative evaporation rate (butyl acetate = 1)	: Data not available
Melting point/melting range	: Data not available
Freezing point	: Data not available
The boiling point	: Data not available
Point of ignition	: Data not available
Auto-ignition temperature	: Data not available
Decomposition temperature	: Data not available
Flammability (solids, gases)	: Data not available
Vapor pressure	: Data not available
Relative vapor density at 20 ° C	: Data not available
Relative density	: Data not available
Density	: Data not available
Solubility	: Dispersible in water
Partition coefficient n-octanol / water (Log Pow)	: Data not available
Viscosity, kinematic	: Data not available
Viscosity, dynamic	: Data not available
Explosiveness	: Data not available
Oxidizing properties	: Data not available
Limited amount	: Data not available

9.2. Other Information

Data not available



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SECTION 10: Stability and Reactivity

10.1. Reactivity

Data not available

10.2. Chemical Stability

The material is stable and does not decompose under normal conditions of use and subject to storage conditions according to section 7.

10.3. Possibility of Hazardous Reactions

Data not available

10.4. Conditions to Avoid

Data not available

10.5. Incompatible Materials

Strong oxidizing agent, strong reducing devices, strong base, strong acid.

10.6. Hazardous Decomposition Products

They do not form under normal use.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

The toxicological effects of the material have not been experimentally determined.

Acute toxicity (oral) : Data not available
Acute toxicity (skin) : Data not available
Acute toxicity (inhalation) : Data not available

Skin corrosion / irritation : Data not available
Serious eye damage / irritation : Data not available
Respiratory or skin sensitization : Data not available
Germ cell mutagenicity : Data not available
Carcinogenicity : IARC: The components in this product have not been identified by IARC at levels greater than or equal to 0.1% as a probable, possible or confirmed carcinogen.

Reproductive toxicity : Data not available
Specific target organ toxicity - single exposure : Inhalation-May cause respiratory irritation

Aspiration hazard : Data not available
Additional information : RTECS: data not available

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

SECTION 12: Ecological Information

12.1. Toxicity

Data not available



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12.2. Persistence and Degradability

Data not available

12.3. Bioaccumulative Potential

Data not available

12.4. Mobility in Soil

Data not available

12.5. Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. Other Adverse Effects

Data not available

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

- Waste Treatment Methods : Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
- Product / packaging disposal recommendations : Dispose of contaminated packaging as unused product.

SECTION 14: Transport Information

In accordance with regulations ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. Identification Number				
-	-	-	-	-
14.2. UN proper shipping name				
Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3. Hazard Class				
-	-	-	-	-
14.4. Packing Group				
-	-	-	-	-
14.5. Danger to the environment				
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No additional information is available				



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14.6. Special precautions for user

Data not available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Data not available

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other Information, Including Date of Preparation or Last Revision

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Regulation on classification, labeling and packaging; Regulation (EC) No 1272/2008
EC number	European Community number
EN	European standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
NOAEL	Dose value without observed adverse effect
OECD	Organization for Economic Co - operation and Development
OEL	Occupational exposure limit
PBT	Persistent, bioaccumulative and toxic substance
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (EC) No. 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very persistent and very bioaccumulative

Data sources	: ECHA guidance on compiling safety data sheets ECHA C&L database Safety data sheet.
Training recommendations	: Provide a safety data sheet to employees. Respect the general rules for handling chemical substances and mixtures.
More information	: This information is based on our current knowledge and is intended to describe the product solely in terms of health, safety and environmental protection requirements. They must not be construed as a guarantee of any specific product features.