



ANTIMICROBIAL ACRYLIC COATING WITH GRAPHENE OXIDE



SAFETY DATA SHEET

ANTIMICROBIAL ACRYLIC COATING WITH GRAPHENE OXIDE

1 Identification of the chemical hazardous substance / mixture and of the company / undertaking

1.1 Name of the hazardous chemical substance or mixture: Acrylic coating with graphene oxide.

1.2 Other means of identification: 100% acrylic aqueous coating.

1.3 Recommended uses of the hazardous chemical mixture, and restrictions on use:
Recommended uses: To paint concrete, cement, plaster, masonry, wood, and other surfaces related to the construction industry.

Restrictions of use: All those not mentioned in the previous line.

1.4 Details of the supplier or manufacturer:

Energeia Fusion, S.A. de C.V. Cerrada de Salamanca 4,
Col. Roma, Alc. Cuauhtémoc, CDMX, 06700.
Telephone number: +52 55 8172 1721
E-mail: contact@graphenemex.com
Monday to Friday from 8:00 a 17:00 h

1.5 Telephone number in case of emergency:

SETIQ: 800 00 21 400 (República mexicana)

2 Hazards identification

2.1 Classification of the hazardous chemical substance or mixture.

The product in its current presentation is not classified as dangerous according to the GHS (Globally Harmonized System)

2.2 Signaling elements of the GHS, including precautionary advice and precautionary pictograms.

	Hazard class	Category	Pictogram	Signal word
Physical danger	Harmful to flora and fauna	4		ATTENTION
Health hazard	Acute toxicity	4		ATTENTION
Hazard indicator by route of entry into the body				
Oral	Harmful if swallowed			
Skin	Causes mild irritation			
Ocular	Causes eye irritation on direct contact			

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Identification code: H

Code	Hazard indicator
H303	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes eye irritation.

Identification code: P

Code	Consejos de prudencia
P103	Read the label before use.
P262	Avoid contact with eyes, skin, or clothing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink, or smoke while handling the product.
P280	Wear gloves, protective clothing, eye, and face protection equipment
P301 + P312	In case of ingestion, call a doctor if the person feels unwell.
P332 + P313	In case of skin irritation, consult a doctor.
P370 + P378	In case of fire, use dry chemical powder, carbon dioxide.
P403 + P235	Store in a ventilated place. Keep cool.
P501	Dispose of contents in accordance with local regulations.

2.3 Other hazards not classified.

No data available.

3 Composition / Information on ingredients

3.1 Substances.

Not applicable.

3.2 For mixtures.

Water based acrylic coating with graphene oxide.

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Components	CAS. No	CE No.	%
Acrylic resin	Confidential	Confidential	15 - 25
Titanium Dioxide	13463-67-7	236-675-5	10 - 25
Inert loads	Not applicable	Not applicable	10 - 25
Water	7732-18-5	231-791-2	40 - 50
Graphene oxide	7782-42-5	947-768-1	1 - 5

VOC (Supply) 0.0% VOC Concentration 0.0 grams per liter.

The identity of the composition of the mixture is considered confidential information, which is expressed in this point, in accordance with NOM-018-STPS-2015, Section 3 last paragraph.

4 First aid measures

4.1 Description of first aid measures.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a doctor.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation Move to fresh air. If symptoms persist, call a doctor.

Protection of First- aiders Use personal protective equipment.

4.2 Most important symptoms and effects, acute and chronic.

Acute: Direct contact with eyes mChronic: No data available.

Chronic: No data available.

4.3 Indication of any immediate medical attention and special treatment needed.

Notes to physician: Treat symptomatically.

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5 Fire- fighting measures

5.1 Suitable Extinguishing Media.

This product is not flammable or comburent. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment, such as CO₂, extinguishing powder or water spray.

5.2 Specific dangers of the hazardous chemical substance or mixture.

In case of fire, the following may be released: carbon monoxide and carbon dioxide.

5.3 Special measures to be followed by fire- fighting groups.

Special protective equipment for fire-fighters.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA: flammability: 0

HMIS: flammability: 0

6 Measures to be taken in case of accidental spill or leak

6.1 Personal precautions, protective equipment, and emergency procedures.

Use personal protective equipment. Avoid contact with skin and eyes. Collect and dispose of with absorbent material.

6.2 Environmental precautions.

Prevent entry into waterways, sewers, basements, or confined areas.

6.3 Methods and materials for the containment and cleaning of spills and leaks.

- Use personal protective equipment.
- Prevent further leakage or spillage if safe to do so.
- Contain the spillage with an inert absorbent material such as sand or earth and confine the area.
- Take up mechanically and collect in suitable container for disposal.

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7 Handling and storage

7.1 Precautions for safe handling.

- Comply with current legislation on occupational risk prevention. Keep containers closed.
- Control spills and residues by disposing of them with safe methods (section 6). Maintain order and cleanliness where dangerous products are handled.
- Do not eat, drink, or smoke in work areas, wash hands after using the material, and remove clothing and protective equipment before entering eating areas.
- It is recommended that you have absorbent material in the vicinity of the product.

7.2 Conditions for safe storage, including any incompatibilities.

- Store the product at a minimum temperature of 5°C (40 °F) and a maximum of 32 °C (90 °F), in a cool, dry, and well-ventilated area.
- Store in a covered place, free of moisture. Avoid storing outdoors, near sources of heat.
- Avoid contact with food.
- Avoid contact with food.

8 Exposure controls / Personal protection

8.1 Control parameters.

- **Exposure limits.** The level of exposure and the types of controls necessary will vary according to the possible conditions of exposure. Appropriate measures include adequate ventilation and/or use of personal protective equipment.

Component name	Exposure limits
Titanium Dioxide (CAS 13463-67-7)	NOM-010-STPS-2014 (México) VLE-PPT: 10 mg/m ³ - 8 hours. TWA: 10 mg/m ³ - 8 hours.

8.2 Appropriate technical controls.

Handle with proper industrial hygiene precautions and respect safety practices. Showers, eyewash stations and ventilation system in good condition.

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8.3 Individual protection measures, such as personal protective equipment, PPE.

Eye Protection	Wear safety glasses. The use of glasses is recommended panoramic against splashes.
Respiratory protection	Use masks and components verified and approved according to the applicable standards
Skin care	Wear protective gloves, replace gloves before any signs of deterioration.
Body protection	Wear non-slip work shoes, replace the work clothes and work footwear in the event of signs of deterioration.
Hygiene measures	Handle with industrial hygiene precautions appropriate, and respect conventional security. An area equipped as a shower is required emergency, as well as eyewash, both fixed and portable.
Environmental exposure controls	Do not allow material to contaminate ground water system.

9 Physical and chemical properties

Boiling point: Undetermined	Appearance: liquid, color (according to color chart)
Melting point: Undetermined	Smell: Typical
Flash point: Not applicable	Evaporation rate: Same as water
Autoignition point: Undetermined	Solubility: Soluble in water
Descomposition temperature: Undetermined	Vapor pressure: Not relevant
Density: 1.200 Kg/L.	Volatility percentage: No relevant
pH: 8.5-11.0	Flammable limit in air: Not applicable
Molecular weight: Undetermined	Vapor density: Not relevant
Physical state: Liquid	Flammability: Not applicable
Color threshold: Undetermined	Partition coefficient: Not relevant
Solids by weight: Not applicable	Viscosity: 8000 - 17000 cps

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10 Stability and reactivity

10.1 Reactivity: No dangerous reactions are expected if the technical storage instructions are followed (see section 7).

10.2 Chemical stability: Chemically stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions: Under the indicated conditions, dangerous reactions that could produce excessive pressure or temperatures are not expected.

10.4 Conditions to avoid: Avoid humidity and extreme temperatures. Refer to the protective measures indicated in sections 7 and 8.

10.5 Incompatible Materials: Strong oxidizing agents, halogens, and acids.

10.6 Hazardous Decomposition Products: Combustion products of organic materials such as carbon monoxide and carbon dioxide may be involved in the ignition of this product.

11 Toxicological information

No experimental data is available of the product itself regarding toxicological properties.

11.1 Information on the probable routes of entry,

11.2 Symptoms related to the physical, chemical, and toxicological characteristics,

11.3 Immediate and delayed effects, as well as chronic effects produced by short or long-term exposure.

Acute toxicity

Inhalation. May be harmful if inhaled.

Eye contact. Contact with the eyes may be harmful.

Skin contact. May cause slight skin irritation.

Ingestion. May be harmful if swallowed.

Chronic toxicity

Sensitization. No data available.

Germ Cell Mutagenicity. No data available.

Carcinogenicity. No data available.

Reproductive toxicity. No data available.

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Specific Target Organ Systemic Toxicity- Single Exposure.

No data available.

Specific Target Organ Toxicity-Repeated Exposure.

No data available.

11.4 Numerical measures of toxicity (such as acute toxicity estimates).

Not determined

11.5 Interactive Effects: No data available.

11.6 Other information: No data available.

12 Ecotoxicological information

12.1 Toxicity: The chemical, physical and toxicological properties, and environment effects have not been studied. Avoid contact of the product with wastewater, soil, aquifers.

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 Other adverse effects: No data available.

13 Disposal considerations

13.1 Disposal Methods.

The generation of waste should be avoided or minimized whenever possible.

- Product: Waste materials must be reviewed to determine the applicability of your risk level. Analysis of these may be required. The provisions for this purpose depend on their classification, as well as the local or federal legislation in this regard. Any chemical addition, processing or other treatment, may alter its characteristics and, therefore, its classification of risk level. The information presented may be incomplete, inadequate or inappropriate for this purpose; due to changes in the product or regulations environmental.

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- **Totally empty containers / packaging:** Empty containers may contain residue, so handle them the same as full containers. Do not use the containers to store water for human consumption.

14 Transport information

	Mexico Classification	Ground transportation ADR/RID	Air Transport IATA /ICAO	Marine transport IMDG
14.1 UN number	Not regulated	Not regulated	Not regulated	Not regulated
14.2 Official designation of transport	Not regulated	Not regulated	Not regulated	Not regulated
14.3 Transport Hazard class(es)	Not regulated	Not regulated	Not regulated	Not regulated
14.4 Packing group	Not regulated	Not regulated	Not regulated	Not regulated
14.5 Environmental hazards	Not applicable	Not applicable	Not applicable	Not applicable
Additional information	-	-	-	-

14.6 Special precautions for user: Non-flammable liquid. Transport in closed containers that are upright and secure. The description of multimodal shipping is provided for information purposes and does not take container sizes into account. The shipping description for a particular mode of transport does not mean that the product is properly packaged for this mode of transport. Ensure that persons transporting the product know what to do in the event of an accident or spill.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:
Not applicable.

15 Regulatory information

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture International Inventories:

This safety data sheet complies with the requirements established in NOM-018-STPS-2015, for the observation of Safety Data Sheets in force in the United Mexican States and Regulation (EC) No. 1907/2006. Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

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16 Other information including that relating to the preparation and updating of safety data sheets

HMIS- Hazardous Material Identification System

(HMIS- Hazardous Material Identification System)

Health: 1

Flammability: 0

Physical hazards: 0

Attention: HMIS system ratings are based on a scale of 0-4, with 0 representing minimal hazards or risks and 4 representing significant hazards or risks. It is the user's responsibility to determine the PPE code for this material. For more information on Team Codes HMIS Personal Protective Equipment (PPE), see the HMIS Implementation Manual.

Hazard Statements.

H303 – May be harmful if swallowed. H315 – Causes skin irritation.

H317 – May cause allergic skin reaction. H319 – Causes eye irritation.

Legal note

The information contained in this document is considered correct and is not intended to be exhaustive, so it should only be used as guide. It is based on the current state of our knowledge and is applicable to the product with respect to appropriate safety precautions. This safety data sheet does not represent a guarantee of the properties of the product. Users must be trained for the correct interpretation of the technical information, as well as for the use, storage, and disposal of the product.

Energeia Fusion, S.A. de C.V., is not responsible for the damages resulting from the incorrect interpretation of the information in this document, as well as the improper handling of the described product.

For more information contact contact@graphenemex.com

Code	I-ENER-8.3
Version	0
Revision	03-01-23