

In accordance with Globally Harmonized System of
Classification and Labelling of Chemicals (GHS)-
Chapter 1.5 and Annex 4

SAFETY DATA SHEET

Product: PU Flex A Compound Armored Floor Graphene - Varnish

Revision: 01

Date: 03/02/2023

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1 - IDENTIFICATION

GHS Product identifier:	PU Flex A Compound Armored Floor Graphene - Varnish
Other means of identification:	047263-00
Recommended use of the chemical:	Floor application.
Specific restrictions on use:	There are not known restrictions on use of the product.
Supplier's details:	ANJO QUIMICA DO BRASIL LTDA
Address:	Acesso Estadual Rio Maina, nº 1165, Bairro Vila Macarini CEP: 88818-800 - SC - BRA
Phone number(s):	(48) 34618000 (48) 34618049
Emergency phone number:	CIATox/SC (Centro de Informação e Assistência Toxicológica de Santa Catarina) 08006435252

2 - HAZARD IDENTIFICATION

Classification of the substance or mixture:	Flammable Liquids - Category 3 Skin Corrosion/Irritation - Category 3 Serious eye damage/eye irritation - Category 2A Skin Sensitization - Category 1 Germ Cell Mutagenicity - Category 1B Carcinogenicity - Category 1B Reproductive Toxicity - Category 1B Specific Target Organ Toxicity - Repeated Exposure - Category 2
Classification system adopted:	Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.

GHS label elements, including precautionary statements

Pictograms:



Signal word: DANGER

Hazard statement(s):
H226 Flammable liquid and vapour.
H316 Causes mild skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H340 May cause genetic defects if inhaled.
H350 May cause cancer if inhaled.
H360 May damage fertility or the unborn child.
H373 May cause damage to the kidneys through prolonged or repeated exposure.

Precautionary statement(s):
PREVENTION:
P203 Obtain, read and follow all safety instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition

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sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating and lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 + P265 Wash hands thoroughly after handling. Do not touch eyes.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection, face protection and hearing protection.

RESPONSE TO EMERGENCY:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P318 IF exposed or concerned, get medical advice.
P319 Get medical help if you feel unwell.
P321 Specific treatment.
P332 + P317 If skin irritation occurs: Get medical help.
P333 + P317 If skin irritation or rash occurs: Get medical help.
P337 + P317 If eye irritation persists: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use carbon dioxide (CO₂), foam, water mist and powder to extinguish.

STORAGE:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

DISPOSITION:

P501 Dispose of contents and container in accordance with local regulations.

Other hazards which do not result in classification: The product has no other hazards.

3 - COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Components contributing to the hazard:	Sec-butyl acetate (CAS 105-46-4): 19.55 - 19.95 %; Ethylglycol acetate (CAS 111-15-9): 10.82 - 11.04 %; Titanium dioxide (CAS 13463-67-7): 2.97 - 3.03 % ¹ ; Dibutyl phthalate (CAS 84-74-2): 1.98 - 2.02 %; Xylene (CAS 1330-20-7): 0.40 - 0.41 %; Aromatic naphtha (CAS 64742-95-6): 0.10 %; 3- glycidyloxypropyl - trimethylsiloxane (CAS 2530-83-8): 0.10 %; Di-n-butyltin dilaurate (CAS 77-58-7): 0.03 %.
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¹ Ingredient not classified as hazardous by the Classification System used, but has an established occupational exposure limit, according to section 8.

4 - FIRST-AID MEASURES

Description of necessary first-aid measures

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim feels unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.
Skin:	Wash exposed skin with sufficient amount of water to remove the material. Take off and isolate contaminated clothing and shoes. In case of skin irritation: contact a doctor. Bring this SDS.
Eye:	Wash carefully with water for several minutes. In case of use of contact lenses, remove them, if possible. Keep washing. If eyes irritation continues: Contact a doctor. Bring this SDS.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse the victims mouth with water in abundance. If the victim feels unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.
Most important symptoms/effects, acute and delayed:	May cause an allergic skin reaction with pruritus and dermatitis. Causes mild skin irritation with redness and dryness. Causes serious eye irritation with redness and pain. May cause damage to the kidneys through prolonged or repeated exposure.
Indication of immediate medical attention and special treatment needed, if necessary:	Avoid contact with the product to help the victim. Keep victim warm and quiet. Symptomatic treatment should comprise mainly supportive measures such as correction of electrolyte disturbances, metabolic, and respiratory support. In case of skin contact do not rub the affected area.

5 - FIRE-FIGHTING MEASURES

Extinguishing media:	Appropriate: carbon dioxide (CO ₂), foam, water mist and powder. Inappropriate: water directly onto the burning product.
Specific hazards arising from the chemical:	The combustion of the chemical containers may form toxic and irritant gases such as carbon monoxide and carbon dioxide. Very dangerous when exposed to excessive heat or other sources of ignition such as sparks, open flames or flames of matches and cigarettes, welding operations, pilot lights and electric motors. Can accumulate static charge by flow or agitation. Vapors from heated liquid can be ignited by static discharge. Vapors are heavier than air and tend to accumulate in low or confined areas, such as sewers and basements. Can travel great distances causing retrogression of the flame or new fires both in open environments in as confined ones. Containers may explode if heated.
Special protective actions for fire-fighters:	Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing. Containers and tanks involved in the fire should be cooled with water mist.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency	Prevent sparks or flames. Do not smoke. Do not touch damaged containers or spilled
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personnel:	material without the use of appropriate clothing. Avoid exposure to the product. Stay in a safe place, with wind from behind. Use personal protective equipment as described in Section 8.
For emergency responders:	Wear complete PPE with safety glasses, safety gloves, suitable protective clothing and closed shoes. In case of leakage, where exposure is high, it is recommended to use a suitable respiratory protection mask.
Environmental precautions:	Avoid that the spilled material reaches waterways or sewage system.
Methods and materials for containment and cleaning up:	Use water mist or vapor suppressing foam to reduce the dispersion of vapors. Use natural barriers or spill containment. Collect spilled material and put it into containers. Adsorb the remaining product with dried sand, vermiculite or any other inert material. Put the adsorbed material in appropriate containers and remove them to a safe place. Use tools that do not cause sparks to collect absorbed material. For final destination, proceed pursuant to Section 13 of this SDS.

7 - HANDLING AND STORAGE

Precautions for safe handling

Precautions for safe handling:	Handle in a ventilated area or with a general local exhaust/ventilation system. Avoid formation of vapors and mists. Handling the product can result in electrostatic charge buildup. All ignition sources must be extinguished from areas during use. Use proper grounding procedures. Use personal protective equipment as described in section 8.
General hygiene:	Wash hands and face thoroughly after handling and before eating, drinking, smoking or going to the bathroom. Contaminated clothing should be changed and washed before reuse. Remove clothing and protective equipment contaminated before entering eating areas.

Conditions for safe storage, including any incompatibilities

Technical measures for prevention of fire and explosion:	Keep away from heat, sparks, open flames and hot surfaces. - Do not smoke. Keep container tightly closed. Ground the container vessel and the receiver of the product during transfers. Only use anti-sparking tools. Avoid the accumulation of electrostatic charges. Use electrical equipment, ventilation and lighting explosion proof. Use personal protective equipment as described in Section 8.
Conditions for safe storage, including any incompatibilities:	Store in a well ventilated place, away from sunlight. Keep container closed. Keep away from high temperatures and ignition sources.
Packaging compatibilities:	Similar to the original packaging.
Inadequate packaging materials:	There are not known unsuitable material of the product.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limit:	The values below apply to workplaces. - <u>Xylene</u> : OSHA - PEL - TWA: 100 ppm; 435 mg/m ³ ; NIOSH - REL - TWA: 100 ppm;
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NIOSH - REL - STEL: 150 ppm;
ACGIH - TLV - TWA: 20 ppm.
- Dibutyl phthalate:
OSHA - PEL - TWA: 5 mg/m³;
NIOSH - REL - TWA: 5 mg/m³;
ACGIH - TLV - TWA: 5 mg/m³.
- Titanium dioxide:
OSHA - PEL - TWA: 15 mg/m³;
NIOSH - REL - TWA: 2.4 mg/m³ (fine); 0.3 mg/m³ (ultrafine); (Ca) (ultrafine particles); (AA); (B63);
ACGIH - TLV - TWA: Nanoscale particles 0.2 mg/mL (R); Finescale particles 2.5 mg/mL (R).
- Ethylglycol acetate:
OSHA - PEL - TWA: 100 ppm; 540 mg/m³;
NIOSH - REL - TWA: 0.5 ppm;
ACGIH - TLV - TWA: 5 ppm.
- Sec-butyl acetate:
OSHA - PEL - TWA: 200 ppm; 950 mg/m³;
NIOSH - REL - TWA: 200 ppm;
ACGIH - TLV - TWA: 50 ppm;
ACGIH - TLV - STEL: 150 ppm.

R: Respirable particulate matter;
Ca: Potential occupational carcinogen.
B63: See NIOSH Intelligence Bulletin 63;
AA: See NIOSH REL Appendix A.

Biological limit: - Xylene:
ACGIH - BEI: Determinant: Methylhippuric acids in urine. Sampling Time: End of shift.
Index: 1.5 g/g creatinine.
- Ethylglycol acetate:
ACGIH - BEI: Determinant: 2-Ethoxyacetic acid in urine. Sampling Time: End of shift at end of workweek. Index: 100 mg/g creatinine.

Other limits and values: Not established.

Appropriate engineering controls: Promote mechanical ventilation and exhaust system to outside. These acts help reducing the exposition to the product. Maintain atmospheric concentrations of the constituents of the product below occupational exposure limits indicated.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection: Safety glasses.

Skin protection: Closed shoes and suitable protective clothing. Appropriate protective gloves.

Respiratory protection: A risk assessment should be performed for proper definition of respiratory protection, in view of the product use conditions.

Thermal hazards: It does not present thermal hazards.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Aspect: Liquid.

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Color:	Not available.	
Odour:	Not available.	
Melting point/freezing point:	Not available.	
Boiling point or initial boiling point and boiling range:	Not available.	
Flammability:	Flammable.	
Lower and upper explosion limit/flammability limit:	Not available.	
Flash point:	$\geq 23\text{ }^{\circ}\text{C}$ (73.4 $^{\circ}\text{F}$) and $\leq 60\text{ }^{\circ}\text{C}$ (140 $^{\circ}\text{F}$) - Closed cup.	
Auto-ignition temperature:	Not available.	
Decomposition temperature:	Not available.	
pH:	Not available.	
Kinematic viscosity:	Not available.	
Solubility(ies):	Immiscible in water.	
Partition coefficient n-octanol/water (log value):	Not available.	
Vapour pressure:	Not available.	
Relative vapour density:	Not available.	
Density and/or relative density:	Not available.	
Particle characteristics:	Not applicable.	
Other information:	Absolute density: 1.0672 g/cm ³ .	

10 - STABILITY AND REACTIVITY

Reactivity:	Reactivity is not to be expected under normal conditions of temperature and pressure.
Chemical stability:	Product is stable under normal conditions of temperature and pressure.
Possibility of hazardous reactions:	Sec-butyl acetate: Reacts with strong oxidizers, strong acids and strong bases with risk of explosion. Product vapors may form explosive mixtures with air. Xylene: Risk of explosion when in contact with nitric acid and uranium hexafluoride. May react dangerously with oxidizing agents and sulfuric acid.
Conditions to avoid:	Elevated temperatures. Ignition sources. Contact with incompatible materials.
Incompatible	Acids, Alkali, Nitrates, Nitric acid, Oxidizing Agents, Oxygen, Strong Oxidizing agents

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material:	and Sulphuric acid.
Hazardous decomposition products:	There are no known hazardous decomposition products.

11 - TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic. ATEmix Oral: > 5000 mg/kg. ATEmix Dermal: > 5000 mg/kg. ATEmix Dusts and mists (4h): > 5 mg/L.
Skin corrosion/irritation:	Causes mild skin irritation with redness and dryness.
Serious eye damage/irritation:	Causes serious eye irritation with redness and pain.
Respiratory or skin sensitization:	May cause an allergic skin reaction with pruritus and dermatitis. Not expected to cause respiratory sensitization.
Germ cell mutagenicity:	May cause genetic defects if inhaled.
Carcinogenicity:	May cause cancer if inhaled.
Reproductive toxicity:	May damage fertility or the unborn child.
STOT - Single exposure:	Not expected to exhibit specific target organ toxicity by single exposure.
STOT - Repeated exposure:	May cause damage to the kidneys through prolonged or repeated exposure.
Aspiration hazard:	Not expected to present an aspiration hazard.

12 - ECOLOGICAL INFORMATION

Toxicity:	It is not expected that the product presents ecotoxicity.
Persistence and degradability:	It is not expected to present persistence and degradability.
Bioaccumulative potential:	The product is not expected to have a high bioaccumulative potential.
Mobility in soil:	Not determined.
Other adverse effects:	There are not known other environmental effects for this product.

13 - DISPOSAL CONSIDERATIONS

Disposal methods

Must be disposed of as hazardous waste in compliance with local regulations. The treatment and disposal should be evaluated for each specific product.
Keep the product remains in its original and properly closed containers. Disposal should be performed as established for the product.

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14 - TRANSPORT INFORMATION

Road: UN - United Nations: Model Regulations:
• Recommendations on the Transport of Dangerous Goods.

UN number: 1263

Proper shipping name: PAINT RELATED MATERIAL

Primary risk class or division: 3

Subsidiary risk class or division: NA

Packing group: III

Railway regulations: COTIF - Convention concerning International Carriage by Rail:
• Appendix C: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail.

UN number: 1263

Proper shipping name: PAINT RELATED MATERIAL

Primary risk class or division: 3

Subsidiary risk class or division: NA

Packing group: III

Sea: IMO - International Maritime Organization:
• IMDG Code - International Maritime Dangerous Goods Code.

UN number: 1263

Proper shipping name: PAINT RELATED MATERIAL

Primary risk class or division: 3

Subsidiary risk class or division: NA

Packing group: III

EmS: F-E,S-E

Environmental hazards: The product is not considered a marine pollutant for transportation.

Air: IATA - International Air Transport Association:
• DGR - Dangerous Goods Regulation.

UN number: 1263

Proper shipping name: PAINT RELATED MATERIAL

Primary risk class or division: 3

Subsidiary risk class: NA

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or division:

Packing group: III

Special precautions
for user: Not applicable.

15 - REGULATORY INFORMATION

Convention concerning Safety in the use of Chemicals at Work (Convention 170) - International Labour Organization, 1990.

16 - OTHER INFORMATION

This SDS was prepared based on current knowledge about the proper product handling and under normal conditions of use, in accordance with the application specified on the packaging. Any other use of the product involving their combination with other materials, and use various forms of those indicated, are the responsibility of the user. Warns that the handling of any chemical substance requires the prior knowledge of its hazards for the user. In the workplace it is for the user company's product promotes training of its collaborators about the possible risks arising from exposure to the chemical.

Elaborated March 2023.

Change control:

Version	Elaboration	Changes
01	03/02/2023	Elaboration

Abbreviations:

ACGIH - American Conference of Governmental Industrial Hygienists;
ATEmix - Acute Toxicity Estimate of the mixture;
BEI - Biological Exposure Index;
CAS - Chemical Abstracts Service;
NIOSH - National Institute for Occupational Safety and Health;
OSHA - Occupational Safety & Health Administration;
PEL - Permissible Exposure Limit;
REL - Recommended Exposure Limit;
STEL - Short Term Exposure Limit;
TLV - Threshold Limit Value;
TWA - Time Weighted Average;
UN - United Nations.

Bibliographic references:

GHS - GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS. 8th rev. ed.
New York: United Nations, 2019.

ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIALS HYGIENISTS. TLVs® and BEIs®: Based on the Documentation of the Threshold Limit Values (TLVs®) for Chemical Substances and Physical Agents & Biological Exposure Indices (BEIs®). Cincinnati-USA, 2022.