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Autor:		Crislei Mascarenhas		
Approver (s):		Deiviti Caetano		

<b>Unid. Acrilonitrila</b> <input type="checkbox"/> Camaçari <input type="checkbox"/> S. Paulo	<b>Unid. Monômeros</b> <input checked="" type="checkbox"/> Candeias <input type="checkbox"/> S. Paulo	<b>Unid. Cianeto</b> <input type="checkbox"/> Candeias <input type="checkbox"/> S. Paulo <input type="checkbox"/> Camaçari	<b>Unid. Fertilizantes</b> <input type="checkbox"/> Candeias <input type="checkbox"/> S. Paulo <input type="checkbox"/> Varginha <input type="checkbox"/> Luiz Eduardo <input type="checkbox"/> Campo Verde	<b>Unid. Plásticos</b> <input type="checkbox"/> Candeias <input type="checkbox"/> S. J. Campos <input type="checkbox"/> S. Paulo	<b>Unid. Estireno</b> <input type="checkbox"/> Cubatão <input type="checkbox"/> Camaçari <input type="checkbox"/> S. Paulo	<b>Unid. Poliestireno</b> <input type="checkbox"/> S. J. Campos <input type="checkbox"/> Guarujá <input type="checkbox"/> S. Paulo	<b>Unid. Látex</b> <input type="checkbox"/> Guarujá <input type="checkbox"/> S. Paulo	<b>Unid. Filmes</b> <input type="checkbox"/> Montenegro <input type="checkbox"/> S. Paulo
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Reference External Standard:  YES  NO

Referenced Standard: Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Versão: 3

Revision history:

VERSION	PUBLICATION DATE	CHANGES
1	04/09/2017	Elaboration according to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Purplebook 6 rev.
2	27/08/2019	Section 11 update.
3	20/09/2019	Substance name change.
4	11/11/2019	Inclusion of Hommel Diagram in section 16.

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## 1 – Identification

GHS Product identifier: Glacial Methacrylic Acid Inhibited

Supplier's details: Proquigel Química S/A

Address: Fazenda Caroba s/n Candeias, BA – Brasil - 43.813-300

Phone number(s): (71) 3878-6532

Emergency phone number: (0\*\*71) 3878-6633/ 6313/ 6990

E-mail: deiviti.caetano@unigel.com.br

## 2 – Hazard identification

Classification of the substance or mixture:

- Flammable liquids – Category 4
- Acute toxicity – Oral – Category 4
- Acute toxicity – Inhalation – Category 4
- Skin corrosion/irritation – Category 1B
- Eye damage/irritation – Category 1
- Specific target organ toxicity – single exposure – Category 3
- Hazardous to the aquatic environment – Acute – Category 3

Classification system adopted: Globally Harmonized System of Classification and Labelling of Chemicals (GHS), United Nations.

### Adequate labeling elements

Pictograms:




Signal word: DANGER

Hazard statement(s):

- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H402 Harmful to aquatic life.

Precautionary statement(s): **PREVENTION:**  
P210 Keep away from heat, hot surfaces, sparks, open

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flames and other ignition sources. No smoking.  
P260 Do not breathe mist, vapours and spray.  
P261 Avoid breathing mist, vapours and spray.  
P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves, protective clothing, eye protection and face protection.

**RESPONSE:**

P301 + P312 IF SWALLOWED: Call a POISON CENTER or a doctor, if you feel unwell.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or a doctor.

P312 Call a POISON CENTER or a doctor, if you feel unwell.

P321 Specific treatment see label.

P330 Rinse mouth.

P363 Wash contaminated clothing before reuse.

P370 + P371 + P378 In case of fire: Use carbon dioxide, water spray, alcohol resistant foam or chemical powder to extinguish.

**STORAGE:**

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

P405 Store locked up.

**DISPOSAL:**

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


Other hazards which do not result in classification: The product does not have other hazards.

**3 - Composition/information on ingredients**

**SUBSTANCES:**

Common chemical name: Glacial Methacrylic Acid Inhibited

Common name(s) of the substance: Methacrylic acid; 2-Methyl-2-propenoic acid; MAA

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CAS number: 79-41-4

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance:

The product does not have impurities which contribute to hazards.

#### 4 - First-aid measures

##### Routes of exposure

Ingestion:

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse the victim's mouth with water in abundance. The effects by mouth may not be immediate. Contact immediately 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 the eyes with sufficient amount of water immediately for several minutes, keeping the eyes opened. In case of use of contact lenses, remove them, if possible. Keep washing. Contact a doctor. Bring this SDS.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Inhalation effects may not be immediate. Contact immediately a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.

Most important symptoms/effects, acute and delayed:

Harmful if swallowed and if inhaled. Causes severe burns to the skin with blistering, peeling and pain, and severe eye damage with burning, tearing and pain. May cause respiratory irritation with coughing and sneezing.


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 site.

#### 5 - Fire-fighting measures

Suitable extinguishing media:

Suitable: Compatible with carbon dioxide (CO<sub>2</sub>), water spray, alcohol resistant foam or chemical powder.  
Not recommended: Water directly on the burning liquid.

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Specific hazards arising from the chemical: 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. The combustion of the chemical products or containers may form toxic and irritant gases such as methanol, carbon monoxide and carbon dioxide.

Special protective actions for fire-fighters: Self-contained breathing apparatus (SCBA) with positive pressure and full protective clothing. Containers and tanks involved in the fire can be cooled by water fog.

## 6 - Accidental release measures


### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel:** Prevent sparks or flames. Do not smoke. Do not touch damaged containers or spilled 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 full PPE with safety goggles or face shield, appropriate protective clothing, safety shoes, neoprene, butyl rubber or polyethylene gloves to prevent skin contact. The material used must be waterproof. In case of leakage, where the exposure is large, it is recommended use multipurpose type masks for organic gases or breathable air 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.

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## 7 - Handling and storage

### Precautions for safe handling

Safe handling of the substance or mixture: Handle in a well ventilated area or with general system of ventilation/local exhaust. Avoid vapors and mists formation. Avoid contact with incompatible materials. 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.

Adequate conditions: Store the product in a cool, ventilated place. Keep the original packaging. Store away from sources of ignition. The addition of stabilizers is required to ensure product durability. Keep away from incompatible materials.

## 8 - Exposure controls/personal protection

### Control parameters

Occupational exposure limit:

Chemical or common name	TLV – TWA (ACGIH, 2016)
Glacial Methacrylic Acid Inhibited (Methacrylic acid)	20 ppm


Biological limit: Not established.

Appropriate engineering controls: Promote direct mechanical ventilation and exhaust system to the outside environment. These measures help reduce exposure to 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 or face shield.

Skin protection: Appropriate protective clothing, safety shoes, neoprene,

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butyl rubber or polyethylene gloves to prevent skin contact.

**Respiratory protection:** Based on occupational exposure limits or hazards from inhalation of the product, a risk assessment must be carried out to properly define the respiratory protection in view of the conditions of use of the product. Respiratory protection may be required in non-routine or emergency situations. Use multipurpose type masks for organic gases or breathable air mask.

**Thermal hazards:** It is not necessary to use specific EPIs, since the product does not present thermal hazards.

## 9 - Physical and chemical properties

**Physical state:** Liquid.

**Colour:** Transparent colorless.

**Odour:** Irritant.

**pH:** 2.0 – 2.2 (100 g/l H<sub>2</sub>O, at 20 °C)

**Melting point/freezing point:** 15°C

**Boiling point or initial boiling point and boiling range:** 161°C

**Flash point:** 77°C (open cup)  
68°C (closed cup)

**Flammability (solid; gas):** Not available.

**Lower and upper explosion limit /flammability limit:** Upper: 8.7%vol.  
Lower: 1.6%vol.

**Vapour pressure:** 0.89 mbar at 20°C


**Relative vapour density:** 2.97 (air = 1,0)

**Density and/or relative density:** Not available.

**Solubility:** Miscible in water and alcohol.

**Partition coefficient n-octanol/water (log value):** Log kow: 0.93

**Auto-ignition temperature:** 365°C

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Decomposition temperature: Not available.

Kinematic viscosity: 1.4 mPa.s at 20°C

Other information: Specific density: 1.014 g/cm<sup>3</sup> at 20°C.  
Specific heat: 1.86 kJ/kg K at 20°C  
Refractive index: 1.426 - 1.430 at 20°C

## 10 - Stability and reactivity

Reactivity: Violent polymerisation may occur in the presence of air between 18-25°C, on exposure to light, heat, organic peroxides, sulfuric radicals, hydroxides, amines, heavy metal salts or other initiators.

Chemical stability: Product stable under normal conditions of temperature and pressure. Stabilizer is used: Mequinol, hydroquinone or hydroquinone mono methyl ether

Possibility of hazardous reactions: Reacts with hydrochloric acid with risk of explosion. Violent reaction with all bases.

Conditions to avoid: Avoid contact with flame and sources of ignition. Contact with light. Contact with incompatible materials.

Incompatible material: Acids and oxidizing agents.

Hazardous decomposition products: There are not known incompatible materials with the product.

## 11 - Toxicological information

Acute toxicity: Harmful if swallowed and if inhaled. It is not expected that the product presents acute dermal toxicity.  
LD<sub>50</sub> (oral, rats): 1,060 mg/kg  
LC<sub>50</sub> (Inhalation, rats, 4h, mists): > 1.0 – 5.0 mg/L


Skin corrosion/irritation: Causes severe burns to the skin with blistering, peeling and pain.

Serious eye damage/irritation: Causes severe eye damage with burning, tearing and pain.

Respiratory or skin sensitization: Not classified as a skin sensitizer and is not expected to cause respiratory sensitization.

Germ cell mutagenicity: Not classified as mutagenic.



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Mutagenicity study performed *in vivo* and *in vitro* presented negative results.

Carcinogenicity: Based on available information, the classification criteria have not been met.

Reproductive toxicity: Based on available information, the classification criteria have not been met.

STOT - Single exposure: May cause respiratory irritation with coughing and sneezing.

STOT - Repeated exposure: Based on available information, the classification criteria have not been met.

Aspiration hazard: Based on available information, the classification criteria have not been met.

## 12 - Ecological information

Toxicity: Harmful to aquatic life.  
 LC<sub>50</sub> (*Oncorhynchus mykiss*, 96h): 85 mg/L  
 EC<sub>50</sub> (*Daphnia magna*, 48h): > 130 mg/L  
 NOEC (*Daphnia magna*, 21d): 53 mg/L  
 EC<sub>50</sub> (*Pseudokirchneriella subcapitata*, 72h): 45 mg/L  
 NOEC (*Pseudokirchneriella subcapitata*, 72h): 8.2 mg/L

Persistence and degradability: The product is expected to exhibit rapid degradation and low persistence.  
 Biodegradability rate: 86% in 28 days.

Bioaccumulative potential: It has low bioaccumulative potential in aquatic organisms.  
 Log kow: 0,93


Mobility in soil: No data available.

Other adverse effects: There are not known adverse environmental effects of the product.

## 13 – Disposal considerations

### Disposal methods

Product: This substance, when discarded or not used, is considered a hazardous waste according to federal regulations. Methacrylic acid is considered to be highly toxic. Disposal should only be made at incineration or industrial landfill sites in accordance with local regulations. Chemical additions, processing or any other modification of this material may result in incomplete, inaccurate or otherwise

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inappropriate information for the handling of the residue.

#### 14 - Transport information

**Road:** UN - "United Nations"  
Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations

UN Number: 2531

UN Proper Shipping Name: METHACRYLIC ACID, STABILIZED

Transport hazard class(es): 8

Packing group: II

**Rail:** Convention concerning International Carriage by Rail (COTIF)  
Appendix C - Regulations concerning the International Carriage of Dangerous Goods by Rail - RID

UN Number: 2531

UN Proper Shipping Name: METHACRYLIC ACID, STABILIZED

Transport hazard class(es): 8

Packing group: II

**Sea:** IMO – International Maritime Organization  
International Maritime Dangerous Goods Code (IMDG Code)

UN Number: 2531

UN Proper Shipping Name: METHACRYLIC ACID, STABILIZED

Transport hazard class(es): 8


Packing group: II

Marine pollutant: The product is not considered a marine pollutant.

EmS: F-A, S-B

**Air:** IATA - International Air Transport Association  
Dangerous Goods Regulation (DGR)

UN Number: 2531

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UN Proper Shipping Name: METHACRYLIC ACID, STABILIZED

Transport hazard class(es): 8

Packing group: II

Environmentally hazardous: The product is not considered environmentally hazardous.

Special precautions for user: There is no need of special precautions.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Consult regulations:  
 - International Maritime Organization. MARPOL: Articles, protocols, annexes, unified interpretations of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, consolidated edition. IMO, London, 2006.  
 - International Maritime Organization. IBC code: International code for the construction and equipment of shipping carrying dangerous chemicals in bulk: With Standards and guidelines relevant to the code. IMO, London, 2007.


## 15 – Regulatory information

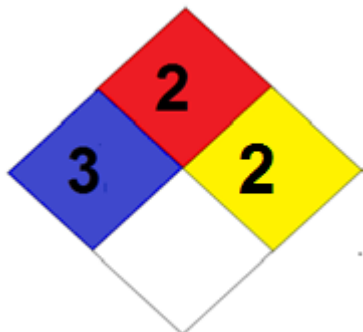
Convention concerning Safety in the use of Chemicals at Work (Convention 170) - International Labour Organization, 1990.

## 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.

To update and additional information go to Proquigel Química S/A, Occupational Hygiene area, tel. +55 (71) 3878-6532

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National Fire Protection Association (NFPA) 704

SDS elaborated in September, 2017.

**Change control:**

Version	Publication date	Changes
01	04/09/2017	Elaboration

**Legendas e abreviaturas:**

ACGIH - American Conference of Governmental Industrial Hygienists

CAS - Chemical Abstracts Service

EC<sub>50</sub> – Effective concentration 50%

LC<sub>50</sub> – Lethal concentration 50%

LD<sub>50</sub> – Lethal dose 50%

TLV - Threshold Limit Value

TWA - Time Weighted Average

**Referências bibliográficas:**

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIALS HYGIENISTS. TLVs® and BEIs®: Baseados na “Documentação” dos Limites de Exposição Ocupacional (TLVs®) para Substâncias Químicas e Agentes Físicos & Índices Biológicos de Exposição (BEIs®). Tradução Associação Brasileira de Higienistas Ocupacionais. São Paulo, 2016.

Globally Harmonized System of Classification and Labelling of Chemicals (GHS). 6. rev. ed. New York: United Nations, 2015.

National Fire Protection Association (NFPA) 704. Standard System for the Identification of the Hazards of Materials for Emergency Response. 2017. Available in: <<https://www.nfpa.org/>> Acesso in: November, 2019.

Proquigel Química S/A – FISPQ – FICHA DE INFORMAÇÕES DE SEGURANÇA DE PRODUTOS QUÍMICOS: ÁCIDO METACRÍLICO (MAA), VERSION 1, São Paulo, September 4, 2017.