	MATERIAL SAFETY DATA SHEET	MSDS:	PET0002
	ISOAMYL ALCOHOL OR ISOPENTANOL	Revision:	10
		Date:	02/14/2023
		Page:	1 de 13

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 – Product identifier

Product name: ISOAMYL ALCOHOL OR ISOPENTANOL
Internal product code: **N/A.**
EC No: 204-633-5
CAS No: 123-51-3
Registration number (REACH): 01-2119493725-26-0007

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses For industrial use, in organic synthesis, solvents, fragrances, pharmaceuticals, plasticizers, etc.

1.3- Details of the supplier of the safety data sheet

Manufacturer/Supplier **PETROM – Petroquímica Mogi das Cruzes S/A**
Street address/P.O.Box **Rodovia Dom Paulo Rolim Loureiro, km 09, Vila Moraes –Mogi das Cruzes – SP – Brasil.**
Country ID / Postcode **Brazil / 08766-500**
/Place:
Telephone number **+55 (11) 4798-7500/7600**
Website: **<http://www.petrom.com.br>**
Email **petrom@petrom.com.br**

1.4 - Emergency telephone number


Opening hours 24 hours
Emergency Phone **+55 (11) 4798-7500**

SECTION 2: HAZARDS IDENTIFICATION

Hazard classification according to Regulation (EC) No. 1272/2008 [CLP]

2.1 Classification of the substance or mixture

Hazard Classification	Category
Flammable liquids	3
Acute toxicity - Oral	4
Skin Corrosion/irritation	2
Serious Eye Damage/Eye Irritation	1
Specific target organ toxicity (single exposure)	3

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	2 de 13

2.2 – Label element



Hazard Pictograms

Signal Word

DANGER

Hazard Phrases

H226 – Flammable liquid and vapor.

H302 – Harmful if swallowed.

H315 – Causes skin irritation.

H318 – Causes serious eye damage.

H335 – May cause respiratory irritation.

Prevention:

P210 – Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.

P233 – Keep container tightly closed.

P240 – Ground/bond container and receiving equipment.

P241 – Use explosion-proof [electrical/ventilating/lighting] equipment.

P242 – Use only non-sparking tools.

P243 – Take precautionary measures against static discharge.

P261 - Avoid breathing dust/fume/gas/mist/vapors/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.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Emergency Response:

P301 + P312 - IF SWALLOWED: call a POISON CENTER/doctor /physician IF you feel unwell.

P302 + P352 - IN CASE OF CONTACT WITH SKIN: Wash with plenty of soap and water.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].

Hazard statements

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 doctor/physician.

P321 - Specific treatment (symptomatic).

P330 - Rinse mouth.

P332 + P313 – IF SKIN irritation occurs: Get medical advice/attention.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

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

Storage:


P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

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

P405 - Store locked up.

Disposal:

P501- Dispose of contents/container in appropriate locations for waste / final disposal (appropriate landfill accredited by competent bodies and/or with specialized companies for incineration or another destination in accordance with the municipal and state laws of the region).

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	3 de 13

Supplemental Hazard information (EU): Not applicable.

2.3 - Other hazards

There are no other hazards.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

ISOAMYL ALCOHOL OR ISOPENTANOL is a SUBSTANCE.

3.1 Substance

CAS No	123-51-3
EC No	204-633-5
Index No	603-006-00-7
REACH Registration No	01-2119493725-26-0007
% [weight]	>=99%
Substance name	Isoamyl alcohol or isopentanol
Classification according to Regulation (EC) No 1278/2008 (CLP).	Flammable liquids – Category 3; Acute toxicity – Oral – Category 4; Skin Corrosion/irritation - Category 2; Serious Eye Damage/Eye Irritation – Category 1; Specific target organ toxicity (single exposure) - Category 3.
SCL,	
M-factor, ATE	--
Other ingredients	Does not show impurities that may contribute to danger.


3.2 Mixture

Not applicable

SECTION 4: FIRST AID MEASURES

4.1 - Description of first aid measures

Following inhalation:	Remove the victim to a well-ventilated area and keep at rest in a position that does not impede breathing. Lay the victim down in a quiet place and protect him from hypothermia. Monitor respiratory function. If the victim is breathing hard, give oxygen. If necessary apply artificial respiration. Seek medical assistance immediately, taking this MSDS, the label and package leaflet of the product.
Following Skin contact:	Wash exposed skin with sufficient amount of water to remove material. Preferably use an emergency shower. Seek medical assistance immediately, taking this MSDS, the label and package leaflet of the product.
Following eye contact:	Rinse carefully with water for 15 minutes, keeping eyelids open. If you wear contact lenses, remove them if this is easy. Use preferably an eye washer. Seek medical assistance immediately, taking this MSDS, the label and package leaflet of the product.
Following ingestion:	Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. To prevent aspiration of ingestion product, place victim on side with head lower than waist. Seek medical assistance immediately, taking this MSDS, the label and package leaflet of the product.
What actions should be avoided:	Do not induce vomiting and do not administer anything orally if the person is unconscious.

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	4 de 13

Self-protection of the first aider Avoid contact with the product while providing aid to the victim.

4.2- Most important symptoms and effects, both acute and delayed

Adverse effects to human health Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Irritation in the airways with coughing and respiratory distress. Local redness and itching of the skin. Serious eye injuries with local redness and/or tearing in the eyes. Repeated and/or prolonged exposure may cause severe symptoms.

4.3- Most important symptoms and effects, both acute and delayed Adverse effects to human health

Notes to physician: There is no specific antidote. Treat according to symptoms under clinical conditions. Avoid exposure to the product when rescuing the victim. In case of contact with the skin, do not rub the affected area. Keep the victim under observation.

SECTION 5: FIREFIGHTING MEASURES

5.1 - Extinguishing Media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry powder, carbon dioxide.

Insuitable extinguishing media Water jet extinguishers should be avoided in order not to cause spreading of the product to other regions.

5.2 - Special hazards arising from the substance or mixture

Special Procedures Evacuate an 800-meter-radius area. Fire fight from a safe distance. Use full PPE and respiratory protection of autonomous type (SCBA) with positive pressure. Use levees to contain the water used in combat. Position yourself with your back to the wind. Use water mist to cool down equipment exposed in the vicinity of the fire.

Hazardous combustion products: Flammable liquids and vapours. In thermal decomposition, it forms irritating and toxic gases such as carbon monoxide and dioxide.

5.3 – Advice for firefighters

Respiratory protective equipment of autonomous type (SCBA) with positive pressure and full protective clothing. Containers and tanks involved in the fire must be cooled with water jets.


SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 - Personal precautions, protective equipment and emergency procedures

6.1.1 - For non-emergency personnel Do not touch damaged containers or spilled material unless wearing appropriate clothing. Avoid inhalation, eye and skin contact. Use individual protection equipment as described in section 8. Respiratory protection must be carried out depending on the concentrations present in the environment or the extent of spillage/leakage, therefore, respiratory masks with a filter against vapors and mists must be chosen. Do not handle ruptured packaging unless properly protected with the use of personal protective equipment. Do not touch or walk through spilled product. Remove any sources of ignition. Do not smoke. Stay out of low areas, with the wind at your back.

6.1.2 - For emergency responders Personal precautions: Use complete PPE, with suitable protective clothing, splash goggles, closed shoes, nitrile rubber or PVC gloves or other impermeable material. Respiratory protection should be carried out depending on the concentrations present in the environment or the extent of spillage/leakage, therefore, respiratory masks with a filter against vapors and mists should be chosen.

Removal of ignition sources: Interrupt the power supply and disconnect sources of sparks. Remove from the site any material that may start a fire (ex.: diesel oil spill).
Dust Control: Not applicable as it is a liquid.

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	5 de 13

Prevention of inhalation and contact with the skin, mucous membranes and eyes: Use clothes and accessories as described above. Use eye protection.

6.2 – Environmental precautions

Precautions for the environment: Do not allow it to reach pipes or waterways. In case of pollution of rivers, lakes, or drainage for sewage, contact competent authorities in accordance with local laws.

6.3- Methods and material for containment and cleaning up

Prevention of secondary hazards

Paved Floor: Use water mist or vapor suppressing foam to reduce vapor drift. Use natural or spill containment barriers. Collect spilled product and place in appropriate containers. Adsorb the remaining product with dry sand, earth, vermiculite, or any other inert material. Place the adsorbed material in appropriate containers and remove them to a safe place. Soil: Remove the layers of contaminated soil until uncontaminated soil is reached, collect this material and place in a sealed container properly labeled; Water bodies: Immediately stop collection for human or animal consumption, contact the nearest environmental agency and the emergency center of the company, as the measures to be adopted depend on the proportion of the accident, the characteristics of the water resource in question and the quantity of the product involved. For final disposal, proceed according to Section 13 of this MSDS.

6.4- Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1- Precautions for safe handling:

Safe handling guidelines


Use the product following the recommendations of the manufacturer. Use PPE as described in Item 8. Avoid contact with skin, eyes and clothing. Keep people, especially children and pets away from the area of work. Do not come into direct contact with product. Keep product in its original container. Keep any leftovers of products in their original packages properly closed. Handle the product with appropriate local exhaust ventilation or in a well ventilated area, in open ambients, handle it downwind. In the case of intoxication symptoms, stop work immediately and proceed as described in item 4 of this sheet.

Exposure prevention for workers

Manipulate in a ventilated area or with general system of local ventilation. Use PPE as described in Item 8. Do not eat, drink or smoke when handling the product. Wash hands before eating, drinking, smoking or using the toilet. Upon opening the package do it so as to avoid spillage. Do not use individual protection equipment damaged and /or defective. Do not unclog nozzles, orifices, pipes and valves with the mouth. Do not manipulate and/or carry damaged packages. Adopt good personal hygiene practices. Do not store or consume food in the workplace. Contaminated clothing must be changed and washed before reuse. Remove clothing and contaminated protective equipment before entering eating areas.

Technical measures appropriate to the worker

Appropriate Wash contaminated clothing separately before reuse, avoiding contact with other utensils for personal use. Wash hands and face during breaks and at the end of working hours.
Inappropriate: Do not wash contaminated clothes together with other pieces of clothing or utensils for personal use.

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	6 de 13

7.2 - Conditions for safe storage, including any incompatibility

Adequate	Store in a tightly closed container in a dry, cool, well-ventilated area away from incompatible materials. Carefully close open containers and store in an upright position to prevent leaks. Always store in containers that correspond to the original packaging. Observe the indications on the label. Protect from direct sunlight. Keep away from sources of ignition. Keep away from heat. Sources of heat and direct sunlight.
To avoid Fire and explosion prevention	The product is considered flammable. Keep the product away from heat, sparks, open flames and other ignition sources.
Incompatible product and materials / other information	Do not store together with food, rations, medications, beverages intended for human and animal consumption, incompatible materials (chlorine, hydrogen peroxide, sulfuric acid, alkali metals, fluorine, strong oxidizing agents, oxygen, acetic aldehyde and peroxomonosulfuric acid).
Safe materials for packaging	<u>Recommended:</u> Product is already packed in appropriate packaging. Store in metal or polyethylene drums.

7.3 - Specific end use(s)

See the technical information sheet of this product for more information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

	Chemical name	Exposure Limit	Type	References
Occupational exposure limits	Isoamyl alcohol	78 ppm (280 mg/m ³)	LT	NR-15
		100 ppm (360 mg/m ³)	PEL-TWA	OSHA
		125 ppm (450 mg/m ³)	REL-STEL	NIOSH
		100 ppm	TLV-TWA	ACGIH
		125 ppm	TLV-STEL	


Biological indicators: There are no biological indicators of exposure established (NR-7).

8.2 Exposure controls

8.2.1 - Appropriate engineering controls: The ventilation rate should be in accordance with the conditions. If applicable, use process protections, local exhaust ventilation or other engineering controls to keep the levels of material transported by air below the recommended exposure limits. It is mandatory to have facilities to wash out eyes and an emergency shower when handling this product.

8.2.2 - Personal protection equipment:



	MATERIAL SAFETY DATA SHEET	MSDS:	PET0002
	ISOAMYL ALCOHOL OR ISOPENTANOL	Revision:	10
		Date:	02/14/2023
		Page:	7 de 13

Respiratory protection:	Respiratory protection mask with filter against vapors and mists.
Hand protection:	Safety gloves. The following materials are suitable for protective gloves: Polychloroprene; Nitrile rubber; Carbon fluorinated rubber.
Eye and face protection:	Safety glasses with side splash shields.
Skin protection	Appropriate protective clothing and closed-toe shoes.
Thermal hazards:	Does not present thermal hazards.
Hygiene measures:	Wash contaminated clothing separately, avoiding contact with other utensils for personal use.

8.2.3 Environmental exposure controls:


See SECTION 7 (Handling and storage) and SECTION 13 (Disposal considerations) for measures to avoid excessive environmental exposure during use and waste disposal.

Technical measures to prevent exposure	Keep the PPE properly clean and in proper conditions of use, periodically carrying out inspections and possible maintenance and/or replacement of damaged equipment.
Instruction measures to prevent exposure:	Take a bath and change clothes after using the product. Wash contaminated clothing separately, avoiding contact with other utensils for personal use.
Organizational measures to prevent exposure	Emergency shower and eyewash.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Colorless to yellowish liquid.
Odour	Characteristic. Odor limit: 25 mg/m ³ .
pH	Not available.
Melting point/freezing point:	-117°C.
Boiling point or initial boiling point and boiling range:	132°C.
Flash Point	45°C (closed cup); 55°C (open cup).
Evaporation rate	Not available.
Flammability	Flammable.
Lower/upper limit of flammability or explosiveness	Lower: 1.2% vol. / Upper: 9% vol.
Vapor density	3.04 (air = 1).

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	8 de 13

Density	0.8 (water=1).
Steam pressure	0.283 kPa at 20°C.
Solubility	Partially soluble in water (25 g/L in water at 25°C); freely soluble in acetone; miscible with alcohol, ether, benzene, chloroform and glacial acetic acid.
Partition coefficient – n-octanol/water	LogK _{ow} : 1.42
Auto-ignition temperature	350°C.
Decomposition temperature	Not available.
Viscosity	3.738 cP at 25°C.
Surface tension	Not available.
Corrosivity	Not available.

9.2– Other information

Molecular weight	88.15 g/mol.
Heat of combustion	794.98 kcal/mol.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

There are no hazardous reactions known.

10.2 Chemical stability

Stable under normal conditions of handling and storage. Does not undergo polymerization.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with chlorine, hydrogen peroxide and sulfuric acid. Substance may react dangerously with alkali metals, fluorine, strong oxidizing agents, oxygen, acetic aldehyde and peroxomonosulfuric acid.

10.4 Conditions to avoid


Elevated temperatures and contact with incompatible materials (strong oxidizing agents). Avoid direct contact with sunlight.

10.5 Incompatible materials

Chlorine, hydrogen peroxide, sulfuric acid, alkali metals, fluorine, strong oxidizing agents, oxygen, acetic aldehyde and peroxomonosulfuric acid.

10.6 Hazardous decomposition products

In thermal decomposition it forms irritating and toxic gases such as carbon monoxide and dioxide.

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	9 de 13

SECTION 11: TOXICOLOGICAL INFORMATION


11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity:	<u>LD50 Oral in rats:</u> 1300 mg/Kg. <u>LD50 Dermal in rats:</u> 3970 mg/Kg. <u>LC50 Inhalation:</u> Not available.
Skin corrosion /irritation:	Causes skin irritation with the possibility of developing symptoms such as local redness and itching.
Serious eye damage/irritation	It causes serious eye damage with the possibility of developing symptoms, such as local redness and/or tearing.
Respiratory or skin sensitization	Not sensitizing. <u>Carcinogenicity:</u> The product is not expected to be carcinogenic.
Chronic toxicity:	<u>Mutagenicity:</u> No positive results were observed in any of the trials. Gene mutation tests in bacteria were performed with the substance. No potential for gene mutation in mammalian cells has been confirmed. It was therefore concluded that the substance is not genotoxic for bacteria or mammalian cells in vitro and is also not clastogenic in mammalian cells in vitro or in vivo.
Systemic toxicity to target organ:	<u>Effects on reproduction:</u> No adverse effects on fertility or organs with reproductive function were observed in rats up to threshold doses in screening studies, an extended one-generation study, and in subchronic oral toxicity studies.
	<u>Single exposure:</u> May cause respiratory irritation.
	<u>Repeated exposure:</u> The product is not expected to cause organ damage through prolonged or repeated exposure.
Aspiration hazard:	It is not expected that the product present aspiration hazard.
Other Information:	Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to aquatic organisms:	<u>CL50 Fish (<i>Danio rerio</i>) (96h):</u> >120 mg/L.
	<u>CL50 Fish (<i>Oncorhynchus mykiss</i>) (96h):</u> 700 mg/L.
	<u>CE50 Microcustaceae (<i>Daphnia Magna</i>) (48h):</u> 255 mg/L.
	<u>CE0 Algae (<i>Desmodesmus subspicatus</i>) (72h):</u> >500 mg/L.
Toxicity to other organisms:	LC50 Birds: Not available.
	LC50 Bees: Not available.
	LC50 Earthworms: Not available.

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	10 de 13

Main effects: The product is not classified as dangerous for aquatic organisms.

12.2 Persistence and degradability

The substance is considered to be readily biodegradable.

12.3 Bioaccumulative potential

Significant accumulation of test substance in organisms is not to be expected.

12.4 Mobility in soil

High mobility in soil is expected.

12.5 Results of PBT and vPvB assessment

Not available.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No other environmental effects are known for this product.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product/Leftover
of Product

It must be disposed of as hazardous waste in accordance with local legislation. Treatment and disposal must be evaluated specifically for each product. Federal, state and municipal legislation should be consulted, including: CONAMA Resolution 005/1993, Law No. 12,305, of August 2, 2010 (National Policy on Solid Waste). Keep product residues in their original packaging and properly closed. Disposal must be carried out as established for the product. Keep product residues in their original and closed packaging, in accordance with local legislation.

Used packaging:


Used packages must be emptied as well as possible and disposed of according to the dangerousness of the contents. Never reuse empty packages, as they may contain product residues and must be kept closed and sent to an appropriate location in accordance with local legislation.

SECTION 14: TRANSPORTATION INFORMATION

National and international regulations

Land classification (railroads, highways) pursuant to National Land Transportation Agency: (ANTT):

- UN Number: 1105
- Name for shipment: PENTANOLS
- Main Risk Class/Subclass: 3
- Subsidiary Risk Class/Subclass: none
- Risk Number: 30
- Packing Group: III
- Special Provision: 223
- Quantity Exemption for Transportation:
 - Vehicle: 1000 kg.
 - Internal Packaging: 5 L.
- Danger to the environment: Not.

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	11 de 13

Waterway classification (maritime, fluvial, lacustrine) pursuant to Maritime International Dangerous Goods (IMDG) and National Water Transportation Agency (ANTAQ):

- UN Number: 1105
- Name for shipment: PENTANOLS
- Main Risk Class/Subclass: 3
- Subsidiary Risk Class/Subclass: none
- Risk Number: 30
- Packing Group: III
- Marine pollutant: NO.
- EmS: F-E - S-D
- Danger to the environment: Not available.

Airspace classification pursuant to International Aviation Organization - Technical Instructions (ICAO-TI) and National Civil Aviation Agency (ANAC):

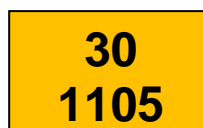
- UN Number: 1105
- Name for shipment: PENTANOLS
- Main Risk Class/Subclass: 3
- Subsidiary Risk Class/Subclass: none
- Risk Number: 30
- Packing Group: III
- Danger to the environment: Not available

-CHEMICAL INCOMPATIBILITY OF THIS PRODUCT FOR TRANSPORTATION: (*)This substance/product is incompatible with the substances and articles of class 1 (explosives) and their respective subclasses; except for the products of the subclass 1.4 compatibility group S. incompatible with subclass 4.1+1 (self-reactive substances that contain the label of subsidiary risk of explosive) and with subclass 5.2 +1 (organic peroxides that contain the subsidiary risk of explosive).

Notes: THIS IS THE IDENTIFICATION IF THE TRANSPORTATION / SHIPMENT IS ONLY FOR THIS PRODUCT/ SAME SHIPMENT DESCRIPTION.



MAIN RISK LABEL




SECURITY PANEL

DESCRIPTION/CORRECT SEQUENCE TO ISSUE INVOICE:

UN1105 PENTANÓIS (Isoamyl Alcohol), 3, III

DISPATCHER'S DECLARATION REQUIRED TO BE PRINTED ON THE INVOICE:

"I declare that hazardous products are properly classified, packaged, marked, and stowed to withstand the risks of transportation operations and that meet the requirements of the regulation".

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	12 de 13

Ministry of Transportation-MT- Regulation of Transportation of Dangerous Products - RTPP

Note- The Regulations referred above are those which are in force on the day of updating this MSDS. Considering the continuous evolution of regulations for transportation of dangerous products, it is advisable to ensure the validity of the same with the competent responsible bodies.

SECTION 15: REGULATORY INFORMATION

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

REACH Regulation (CE) No. 1907/2006

This product only contains compounds that are on the list of pre-registered, registered or exempt substances from registration or are already considered registered in accordance with Regulation (EC) No. 1907/2006 (REACH)., The above statements on the status of the registration of The substance is provided in good faith and is assumed to be accurate, as is the effective date shown above. However, no warranty is offered, either express or implied. It is the buyer / consumer's obligation to ensure that they correctly understand the regulatory status of the product.

Seveso III: Directive 2012/18 / EU of the European Parliament and of the Council on the control of the risks inherent in serious accidents involving dangerous substances.

Listed in the Regulation: Not applicable.

Regulation (EC) No. 649/2012 of the European Parliament and of the Council, of July 4, 2012, relative to the export and import of dangerous chemicals: Not applicable.

15.2 – Chemical Safety Assessment

For the proper and safe use of this product, please refer to the approved conditions stated on the product label.

SECTION 16: OTHER INFORMATION

Revision date: 02-14-2023

Version: 2

Recommended use- Follow all recommendations of use, storage, and disposal indicated by the manufacturer/registrant and described on the packaging, product package insert and cited in Section 1 of this MSDS.

Texts of the sentences covered in section 2:

H226 –Flammable liquid and vapor.

H302 – Harmful if swallowed.

H315 – Causes skin irritation.

H318 – Causes serious eye damage.

H335 – May cause respiratory irritation.

No. 1272/2008 [CLP]:

Flammable liquids – Category 3: H226;


Acute toxicity – Oral – Category 4: H302;

Skin Corrosion/irritation - Category 2: H315;

Serious Eye Damage/Eye Irritation – Category 1: H318;

Specific target organ toxicity (single exposure) - Category 3: H335.

Important Legal Notice Important- The data and information contained herein is provided in good faith and represent the best current knowledge about the matter, and are based from data supplied by the registrant company, manufacturer or importer of this product, available at the moment, however do not completely

	MATERIAL SAFETY DATA SHEET ISOAMYL ALCOHOL OR ISOPENTANOL	MSDS:	PET0002
		Revision:	10
		Date:	02/14/2023
		Page:	13 de 13

exhaust the subject. No warranty is given about the result of the application of such data and information, not absolving users/receivers /workers/employers of their responsibilities, at any stage of the handling, storage, processing, packaging and distribution of this material/product. Prevail over the data contained herein the provisions in the legislation, regulations and standards in force. The registrant assumes no liability for any losses, damages, or expenses related to the handling, storage, use or disposal of the product, repair of damages or compensation of any kind.

Be warned that the handling of any chemical substance requires prior knowledge of its dangers by the user. The company using the product should promote the training of its employees and contractors regarding the possible risks coming from the product.

Glossary:

ACGIH – American Conference of Governmental Industrial Hygienists;

GHS – Globally Harmonized System

LC50 – Lethal Concentration

LD50 – Lethal Dose

EC50 - effective concentration

NFPA - National Fire Protection Association

PPE - Personal Protection Equipment;

N/A. - Not applicable;

N/A. - Not available;

NR - Not relevant;

UN: The United Nations Organization;

OSHA - Occupational Safety and Health Administration;

PEL -Permissible Exposure Limits;

REL - Recommended Exposure Limits;

TLV - Threshold limit value;

TWA - Time Weighted Average.

NBR - Brazilian Standard

GHS - Globally Harmonized System

ABNT - Brazilian Technical Standards

EPA - Environmental Protection Agency

IARC - International Agency for Research on Cancer