

SECTION 1 - IDENTIFICATION

1.1 Product identifier

Product name: **POLISOL**
Product Identifier:

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

Relevant identified uses: Emulsion. Polymeric blend of butylene.

1.3 Details of the supplier of the Safety Data Sheet

YPF S.A.

Macacha Güemes n° 515, (C1106BKK) Puerto Madero, Ciudad Autónoma de Buenos Aires, Argentina.
P: +54 11 5441 2000. F: +54 11 5441 5796.

1.4 Emergency telephone number

Emergency phone (24 hours): CIQUIME 0800 222 2933 (from Argentina)
+54 11 4552 8747 (other countries)

SECTION 2 – HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to the Globally Harmonized System

Flammable liquids (Category 3)

2.2 Label elements

Pictogram:



WARNING

Signal word:

Hazard statements:

H226 - Flammable liquid and vapour.

Precautionary statements:

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

P233 - Keep container tightly closed.

P242 - Use non-sparking tools.

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

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

P370 + P372 + P380 + P373 - IN CASE OF FIRE: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.

P501 - Dispose of contents and/or container in accordance with national and international regulations.

2.3 Other hazards

The product can generate slippery surfaces. Avoid spilling.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Does not apply.

3.2 Mixtures

IDENTIFICATION NAME	CAS No.	Weight %	CLASSIFICATION
Mixture of butylene dimers and trimers	-	100	Not classified

SECTION 4 – FIRST-AID MEASURES

4.1 Description of first aid measures

General advice:	Avoid exposure to the product and take appropriate protective measures. Consult your doctor with the safety data sheet.
Inhalation:	Move victim to an area with clean air. Keep her at rest. If not breathing, apply CPR. Call the doctor.
Skin contact:	Immediately wash skin with plenty of soap and water for at least 15 minutes. Contact with hot product may cause burns.
Eye contact:	Immediately flush eyes with water for at least 15 minutes, keeping eyelids open. If you have contact lenses, remove them after 5 minutes and continue rinsing eyes. Consult the doctor.
Ingestion:	DO NOT INDUCE VOMITING. Rinse mouth with water. If the victim is unconscious, call a doctor immediately, and turn her on her side to reduce the risk of aspiration. Do not give the victim anything to drink or eat.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: may cause nausea, dizziness and headache.

Skin contact: may cause irritation.

Eye contact: may cause irritation.

Ingestion: harmful. Nausea, vomiting, and upset stomach may occur.

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice: Perform symptomatic treatment. For more information, consult a Poison Center.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use dry chemical, foam, sand or carbon dioxide (CO₂). Use the product according to surrounding materials. DO NOT USE water jets as it may spread fire.

5.2 Special hazards arising from the substance or mixture

FLAMMABLE. Container and/or tank subjected to heat may unexpectedly explode and project dangerous fragments. Vapors are heavier than air and may spread along floors.

5.3 Advice for firefighters

5.3.1 Firefighting instructions

Spray containers and/or tanks with water to keep them cool.

Continue cooling with water after fire is out.

Prevent water used for fire control from entering watercourses, drains or springs.

Hot material can cause violent boiling when in contact with water, being able to project and cause serious burns.

5.3.2 Protective clothing

Use SCBA and structural protection clothing for firefighters.

5.3.3 Hazardous combustion products

In case of fire, it may release irritating and/or toxic fumes and gases, such as carbon monoxide, and other substances derived from incomplete combustion.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1 For non-emergency personnel

Evacuate personnel to a ventilated area.

6.1.2 For emergency responders

Wear positive pressure self-contained breathing apparatus and fire-fighting protective clothing (includes fire-fighting helmet, jacket, pants, boots, and gloves). Avoid contact with the product during operations.

For non-fire spills or post-fire cleanup phase, wear chemical protective clothing specifically recommended by the manufacturer.

Eliminate all sources of ignition (no smoking, flares, sparks or open flames in danger area). Ground all equipment used to handle the product. Stop leak if you can do it without risk. Do not touch contaminated objects or areas or walk on the spilled material. You can use foam to reduce the emission of vapors. Do not allow reuse of spilled product.

6.2 Environmental precautions

Contain spilled liquid with a dam or barrier. Prevent entry into navigable waterways, sewers, basements or uncontrolled confined areas.

6.3 Methods and material for containment and cleaning up

Contain and recover the liquid when possible. Collect the liquid product with sand, vermiculite, earth, or inert absorbent material and then completely clean the affected area. Dispose of the waste properly. Dispose of the water and collected waste in marked containers for disposal as waste.

6.4 Reference to other sections

See Section 8 - Exposure Controls and Personal Protection, and Section 13 – Disposal considerations.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not eat, drink or smoke during handling. Avoid contact with eyes, skin and clothing. Wash arms, hands, and nails after handling. Facilitate access to safety showers and eyewash emergency.

Use equipment and clothing that prevents the accumulation of electrostatic charges. Monitor and avoid explosive atmosphere formation.

7.2 Conditions for safe storage, including any incompatibilities

Store in a clean, dry, well-ventilated area. Protect from sunlight. Containers, even those that have been emptied, may contain vapors. Do not cut, drill, grind, weld or perform similar operations on or near empty containers.

Packaging materials: Supplied by the manufacturer.

Incompatibilities: Keep away from Oxidizing and non-oxidizing mineral acids, and strong oxidizing agents.

7.3 Specific end use(s)

Emulsion. Polymeric blend of butylene.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

TLV-TWA (ACGIH):	N/D
TLV-STEL (ACGIH):	N/D
PEL (OSHA):	N/D
IDLH (NIOSH):	N/D

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Keep workplace ventilated. The normal routine ventilation is usually adequate. Local hoods should be used for operations that produce or release large amounts of product. In low or confined areas should be provided mechanical ventilation. Provide showers and eyewash stations.

8.2.2. Individual protection measures, such as personal protective equipment

Eye and face protection: When necessary, wear safety glasses complying with EN 166.

Skin protection: When necessary, wear impermeable protective PVC, nitrile or butyl gloves (complying with standards EN 374), clothes and safety footwear resistant to chemicals.

Respiratory protection: When necessary, wear an organic gas or steam (A) respirator. Special attention to oxygen levels in the air should be paid.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Transparent oily liquid.
Colour:	Yellow.
Odour:	Characteristic.
Odour threshold:	N/D
pH:	Neutral.
Melting point:	N/D
Boiling point:	N/D
Evaporation rate:	N/D
Flammability:	The product is flammable.
Flash point:	25°C (77°F) [ASTM D-92]
Explosive limits:	N/D
Auto-ignition temperature:	N/D
Decomposition temperature:	N/D
Vapour pressure (20°C):	N/D
Vapour density (air=1):	N/D
Relative density (15°C):	0,79 g/cm ³ [ASTM D-1298]
Solubility (20°C):	N/D
Partition coefficient (logKo/w):	N/D
Viscosity (37,8°C):	2,5 cSt [ASTM D-445]
Henry constant (20°C):	N/D
Explosive properties:	Not explosive. This study is not necessary because in the product there are no substances with chemical groups associated with explosive properties.
Oxidizing properties:	This study is not necessary because there are no substances that, due to their chemical structure, can react exothermically with combustible materials.

9.2 Other information

Other properties: Molecular weight: 160-190 (PLP CR-062)

SECTION 10 – STABILITY AND REACTIVITY

10.1. Reactivity

It is not expected that product reactions or decomposition may occur under normal storage conditions. It does not contain organic peroxides. It is not corrosive to metals. It does not react with water.

10.2. Chemical stability

The product is chemically stable and it does not require stabilizers.

10.3. Possibility of hazardous reactions

No hazardous polymerization is expected. Risk of depolymerization and generation of low flash point vapors above 280°C.

10.4. Conditions to avoid

Avoid high temperatures, open flames, sparks and other sources of ignition.

10.5. Incompatible materials

Keep away from Oxidizing and non-oxidizing mineral acids, and strong oxidizing agents.

10.6. Hazardous decomposition products

When heated, it may release toxic and irritating vapors. In case of fire, see section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

There is no information about the toxicity of the product, but acute toxicity estimations are presented.

ATE-LD50 oral (calc.): > 5000 mg/kg

ATE-LD50 der (calc.): > 5000 mg/kg

ATE-LC50 inh. (4 hs., calc): > 5 mg/l

Skin irr. (rabbit, estim.): not irritant

Eye irr. (rabbit, estim.): not irritant

Skin sens (Guinea pig, estim.): not sensitizing

Resp. sens (Guinea pig, estim.): not sensitizing

Carcinogenicity, mutagenicity, reproductive toxicity and other effects:

Carcinogenicity: No information is available on any component of this product, present at levels greater than or equal to 0.1%, that is classified as probable, possible or confirmed human carcinogen by IARC (International Agency for Research on Cancer).

Mutagenicity: There are no components of this product, present at a concentration greater than or equal to 0.1%, that classify as mutagens according to the GHS.

Tox. Repr.: There are no components of this product, present at a concentration greater than or equal to 0.1%, that classify as hazardous for reproduction according to the GHS.

Teratogenicity: There are no components of this product, present at a concentration greater than or equal to 0.1%, that classify as a teratogen.

STOT-SE: There are no components of this product, present at a concentration greater than or equal to 1%, that they classify as toxic to target organs according to the GHS.

STOT-RE: There are no components of this product, present at a concentration greater than or equal to 1%, that they classify as toxic to target organs according to the GHS.

Aspiration: There are no components of this product, present at a concentration greater than or equal to 10%, that classify as toxic by aspiration according to the GHS.

Other health hazards: none known.

Acute and delayed effects:

Routes of exposure: Inhalation, skin and eye contact.

Inhalation: may cause nausea, dizziness and headache.

Skin contact: may cause irritation.

Eye contact: may cause irritation.

Ingestion: harmful. Nausea, vomiting, and upset stomach may occur.

SECTION 12 – ECOLOGICAL INFORMATION

12.1. Toxicity

The product is not classified as environmentally dangerous. However, this does not exclude the possibility that large or frequent spills could have a detrimental effect on the environment.

PNEC (water): N/D

PNEC (sea): N/D

PNEC-STP: N/D

12.2. Persistence and degradability

BIODEGRADABILITY (estimated): The product has long insoluble hydrocarbon chains that make its biodegradation difficult. It is not rapidly eliminated from water or soil and has a high persistence in the environment.

12.3. Bioaccumulative potential

Log K_{ow} : N/D

BIOCONCENTRATION FACTOR - BCF (OCDE 305): N/D. Bioaccumulation is unlikely. Due to the high molecular weight of the polymer, diffusion through biological membranes is very small.

12.4. Mobility in soil

HENRY CONSTANT (20°C): N/D

LogKoc: N/D .

12.5. Results of PBT and vPvB assessment

This product does not meet the PBT criteria of Annex XIII of REACH. This product does not meet the vPvB criteria in Annex XIII of REACH.

12.6. Other adverse effects


AOX and metal containing: Does not contain organic halogens nor metals.

SECTION 13 – DISPOSAL CONSIDERATIONS


Dispose of excess product and empty containers in accordance with current environmental protection legislation. Classify and dispose of waste with an authorized company. Disposal procedure: incineration.

SECTION 14 – TRANSPORT INFORMATION

14.1 Transport by land


Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S. (contains butylene dimers and trimers)	
UN/ID Number:	1993	
Hazard class:	3	
Packing group:	III	
Hazard identification number:	30	
Excepted and limited quantity:	5 L / E1	
Special provisions:	274, 601	

14.2 Air transport (ICAO/IATA)

Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S. (contains butylene dimers and trimers)	
UN/ID Number:	1993	
Hazard class:	3	
Packing group:	III	
PAX and Cargo Packing instructions:	Y343; 2L / 355; 60L	
Cargo Packing instructions:	366; 220L	
ERC:	3L	
Special provisions:	-	

14.3 Sea transport (IMO)

IMDG Code

Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S. (contains butylene dimers and trimers)	
UN/ID N°:	1993	
Hazard class:	3	
Packing group:	III	
EMS:	F-E, S-E	
Stowage and manipulation:	Category E	
Segregation:	-	

Marine pollutant: NO

Proper Shipping Name: UN1993; FLAMMABLE LIQUID, N.O.S. (contains butylene dimers and trimers); Class 3; PG III; Flash point 25°C (77°F) c.c.

SECTION 15 – REGULATORY INFORMATION

Not dangerous for the ozone layer.

Volatile organic compounds (VOC's): N/D

NFPA: 0 3 0 - EPP: G

Regulation

Globally Harmonized System of Classification and Labelling of Chemicals, fifth revised edition, 2013 (GHS 2013 - 'ST / SG / AC 10/30 / Rev.5'). The fifth edition is taken into consideration because it is the one valid for Argentina according to Resolution 801/2015 of the SRT. In any case, the information is contrasted with Revision 10 ('ST / SG / AC 10/30 / Rev.10') and clarification is made if required.

Agreement on Transport of Dangerous Products within the MERCOSUR, MERCOSUR\CMC\DEC N° 2/94.

European Agreement on the International Carriage of Dangerous Goods by Road (ADR) and amendments.

International Maritime Dangerous Goods Code (IMDG), International Maritime Organization (IMO).

Regulations of the International Air Transport Association (IATA) on the transport of dangerous goods by air.

SECTION 16 – OTHER INFORMATION

16.1 Abbreviations and acronyms

N/A: not applicable.

N/D: no data available.

CAS: Chemical Abstracts Service

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental

Industrial Hygienists.

TLV: Threshold Limit Value

TWA: Time Weighted Average

STEL: Short Term Exposure

REL: Recommended Exposure Limit.

PEL: Permissible Exposure Limit.

INSHT: National Institute for Safety and Health at Work.

ATE: Acute toxicity estimate.

LD50: Lethal Dose.

LC50: Lethal Concentration.

EC50: Average Effective Concentration.

IC50: Inhibitory Concentration Medium.

DENOMINATION OF GHS CLASSES

Aer.: aerosols

Oxid. Gas: oxidizing gas

Compressed gas: compressed gas

Dissolved gas: dissolved gas

Flam. Gas: flammable gas

Liquefied Refr. Gas: refrigerated liquefied gas

Liquefied gas: liquefied gas

Oxid. Liquid: oxidizing liquid

Flam. Liquid: flammable liquid

Pyr. Liq.: pyrophoric liquid

Met. Corr.: corrosive for metals

Org. Perox.: organic peroxide

Water React. Flam. Gas: substance reactive with water, which emits flammable gases

Oxid. Solid: oxidizing solid

Flam. Solid: flammable solid

Asp Tox.: aspiration toxicity

Carc.: carcinogenicity

Skin Corr. / Irrit.: Corrosion / skin irritation

Eye Damage / Irrit. : Serious eye damage / eye irritation

Lac.: toxic for reproduction - lactation

Muta.: mutagenicity

Repr.: toxic for reproduction

Skin Sens.: skin sensitizer

Resp. Sens.: respiratory sensitizer

STOT Rep. Exp.: Specific target organ toxicity - repeated exposure

STOT Single Exp.: Specific target organ toxicity - single exposure

Acute Tox.: Acute toxicity
Aquatic Acute: Hazardous to the aquatic environment - acute danger

Aquatic Chronic: Dangerous for the aquatic environment - chronic danger
Ozo.: Dangerous for the ozone layer.

16.2 Key literature references and sources for data

International Agency for Research on Cancer (IARC), classification of carcinogens.
Hazard Classification and Labeling of Petroleum Substances in the European Economic Area – 2020, CONCAWE, Brussels, October 2020
European Chemicals Agency – ECHA
GESTIS-Stoffdatenbank, IFA, DGUV, Germany
Annex VI of Regulation (EC) No. 1272/2008, on classification, labeling and packaging of substances and mixtures (CLP Regulation)
US National Library of Medicine - PUBCHEM
eChem Portal, OECD

16.3 Classification and procedure used to derive the classification for mixtures

The classification was performed based on chemical analogues and product information compiled by CIQUIME.

SECTION 2: classification by hazard extrapolation and based on product data.

SECTION 9: product data.

SECTION 11 and 12: calculation of acute toxicity estimation according to GHS, product data and bibliographic data.



Change's control: v.11 - Phrases and formatting update; General Review.

The partial or total modification of this file is not allowed, including the renown of the product, without the authorization of CIQUIME S.R.L.

16.4 Disclaimer

This information only concerns the above-mentioned product and is not to be valid for other (s) product (s) or in any process. This safety data sheet provides health and safety information. The information is to our best knowledge, correct and complete. It is given in good faith but without warranty. The product should be used in applications consistent with our product literature. Individuals handling this product should be in-formed of the recommended safety precautions and should have access to this information. For any other use, exposure should be evaluated so that they can implement appropriate handling practices and training programs to ensure safe operations in the workplace.

It remains the user's own responsibility that this information is appropriate and complete for the special use of this product.