SECTION 1 - IDENTIFICATION

1.1 Product identifier

Product name: **PEX-AP**
Product Identifier:

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

Relevant identified uses: Formulation of soluble and non-soluble oils for machining, refrigeration oils, anti-rust additives for lubricants, emulsifiers for agrochemicals, etc.

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
Aspiration hazard (Category 1)
Long-term (chronic) aquatic hazard (Category 4)

2.2 Label elements

Pictogram:

Signal word: DANGER
Hazard statements:
H304 - May be fatal if swallowed and enters airways.
H413 - May cause long lasting harmful effects to aquatic life.
Precautionary statements:
P273 - Avoid release to the environment.
P301 + P310 - IF SWALLOWED: Call a POISON CENTER or a doctor.
P405 - Store locked up.
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

Benzene, mono-C10-13-alkyl derivs., distn. residues (CAS 84961-70-6): ≥ 99% - Asp. Tox. 1; Aquatic Chronic 4

3.2 Mixtures

Does not apply.

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:	Wash skin with plenty of soap and water for at least 15 minutes. DO NOT use kerosene, naphtha or solvents to remove the product. In case of burns from hot product, cool with water for at least 5 minutes. Don't use ice.
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 irritation if mists are inhaled.
Skin contact: may cause irritation or dermatitis with prolonged or repeated exposure.
Eye contact: may cause eye irritation.
Ingestion: may cause nausea, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice: If swallowed, material may be aspirated into the lungs and cause chemical pneumonia. Treat properly. For more information, consult a Poison Center.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use dry chemical, foam, sand or carbon dioxide (CO_2). Use the product according to surrounding materials. DO NOT USE water jets as it may spread fire. The use of water can cause frothing, or product spillage by violent boiling of water added.

5.2 Special hazards arising from the substance or mixture

The liquid may burn but will not ignite easily.

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 containers, tanks, waterways, 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 can release irritating and/or toxic fumes and gases, such as carbon monoxide and other substances derived from the 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). Evacuate people to a ventilated area. Ventilate immediately, especially in low areas where vapors may accumulate. Do not allow reuse of spilled product.

6.2 Environmental precautions

Contain spilled liquid with a dam. Prevent entry into waterways, sewers, basements or confined areas.
Hazard of significant physical contamination in case of spillage on coastlines, beaches, soil, etc. due to its floatability and oily consistency.
Avoid the entry of the product into sewers and water sources.
Spills form a film on the water surface not allowing oxygen transfer.

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 after handling.

7.2 Conditions for safe storage, including any incompatibilities

Store in a clean, dry, well-ventilated area. Protect from sunlight. Keep containers/packages closed.

Packaging materials:	Supplied by the manufacturer.
Incompatibilities:	Keep away from Oxidizing mineral acids and strong oxidizing agents.

7.3 Specific end use(s)

Formulation of soluble and non-soluble oils for machining, refrigeration oils, anti-rust additives for lubricants, emulsifiers for agrochemicals, etc.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

TLV-TWA (ACGIH):	5 mg/m³, hydrocarbon mist
TLV-STEL (ACGIH):	N/D
PEL (OSHA):	5 mg/m³, hydrocarbon mist
REL:	5 mg/m³, hydrocarbon mist
REL-STEL:	10 mg/m³, hydrocarbon mist
IDLH (NIOSH):	2500 mg/m³, hydrocarbon mist

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 LLDPE, nitrile, PVA or Viton - do not use butyl, rubber, neoprene or PVC - gloves (complying with standards EN 374), clothes and safety footwear resistant to chemicals.
Respiratory protection:	When necessary, wear an oil-proof 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:	Liquid.
Colour:	2,0 max. [ASTM D-1500]
Odour:	N/D
Odour threshold:	N/D
pH:	N/D
Melting point:	máx. -40°C (-40°F)
Boiling point:	270°C to 345°C (518°F to 653°F)
Evaporation rate:	N/D
Flammability:	The product is not flammable.
Flash point:	min. 160°C (320°F) [ASTM D92]
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):	0,8700 - 0,8890 g/cm³ [ASTM D1298]
Solubility (20°C):	Insoluble in water. Soluble in organic solvents.
Partition coefficient (logKo/w):	9,9
Viscosity (40°C):	13 - 25 cSt [ASTM D445)]
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: None.

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 chemically with water, but in contact with hot material it can cause the water to boil violently.

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.

10.4. Conditions to avoid

Evite altas temperaturas.

10.5. Incompatible materials

Keep away from 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:
Bibliographic data are presented for reference.
LD50 oral (bibl): > 2000 mg/kg
LD50 der (bibl.): 3600 mg/kg
LC50 inh. (4 hs., bibl.): > 5 mg/l
Skin irr. (rabbit, bibl): not irritant
Eye irr. (rabbit, bibl.): not irritant
Skin sens (Guinea pig, bibl.): not sensitizing
Resp. sens (Guinea pig, bibl.): not sensitizing
Carcinogenicity, mutagenicity, reproductive toxicity and other effects:
Carcinogenicity: Not classified as carcinogenic according to the GHS.
Mutagenicity: Not classified as mutagenic according to the GHS.
Tox. Repr.: Not classified as toxic for reproduction according to the GHS with effects on sexual function and fertility.

Teratogenicity: It is not classified as toxic for reproduction according to the GHS with effects on the development of offspring.
STOT-SE: Not classified as target organ toxicant for single exposures according to the GHS.
STOT-RE: Not classified as target organ toxic after prolonged or repeated exposure according to the GHS.
Aspiration: The product is toxic by aspiration and the viscosity makes its incorporation possible by this route, which is why it is classified as dangerous by aspiration.
Acute and delayed effects:
Routes of exposure: Inhalation, skin and eye contact.
Inhalation: may cause irritation if mists are inhaled.
Skin contact: may cause irritation or dermatitis with prolonged or repeated exposure.
Eye contact: may cause eye irritation.
Ingestion: may cause nausea, vomiting and diarrhea.

SECTION 12 – ECOLOGICAL INFORMATION

12.1. Toxicity

Bibliographic data of its component are presented for reference.
EC50 (fish, 96 h): >100 mg/l
EC50 (inv., bibl., 48 h): > 100 mg/l
EC50 (algae, bibl., 72 h): > 100 mg/l
NOEC (fish, bibl., 14 d): > 1 mg/l
NOEC (inv., bibl., 14 d): > 1 mg/l
PNEC (water): N/D
PNEC (sea): N/D
PNEC-STP: N/D

12.2. Persistence and degradability

BIODEGRADABILITY (OECD): The product has long insoluble hydrocarbon chains that make its biodegradation difficult.

12.3. Bioaccumulative potential

Log $K_{o/w}$: 9,9
BIOCONCENTRATION FACTOR - BCF (OCDE 305): N/D. There are no data that indicate that the product has bioaccumulation problems in living organisms or of incidence in the food chain.

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 according to current legislation for the protection of the environment and hazardous waste. Disposal procedure: incineration.

SECTION 14 – TRANSPORT INFORMATION

14.1 Transport by land

Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS
UN/ID Number:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard class:	NOT CLASSIFIED AS A DANGEROUS GOODS
Packing group:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard identification number:	NOT CLASSIFIED AS A DANGEROUS GOODS
Excepted and limited quantity:	NOT CLASSIFIED AS A DANGEROUS GOODS
Special provisions:	NOT CLASSIFIED AS A DANGEROUS GOODS

14.2 Air transport (ICAO/IATA)

Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS
UN/ID Number:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard class:	NOT CLASSIFIED AS A DANGEROUS GOODS
Packing group:	NOT CLASSIFIED AS A DANGEROUS GOODS
PAX and Cargo Packing instructions:	NOT CLASSIFIED AS A DANGEROUS GOODS
Cargo Packing instructions:	NOT CLASSIFIED AS A DANGEROUS GOODS
ERC:	NOT CLASSIFIED AS A DANGEROUS GOODS
Special provisions:	NOT CLASSIFIED AS A DANGEROUS GOODS

14.3 Sea transport (IMO)

IMDG Code

Proper Shipping Name:	NOT CLASSIFIED AS A DANGEROUS GOODS
UN/ID N°:	NOT CLASSIFIED AS A DANGEROUS GOODS
Hazard class:	NOT CLASSIFIED AS A DANGEROUS GOODS
Packing group:	NOT CLASSIFIED AS A DANGEROUS GOODS
EMS:	NOT CLASSIFIED AS A DANGEROUS GOODS
Stowage and manipulation:	NOT CLASSIFIED AS A DANGEROUS GOODS
Segregation:	NOT CLASSIFIED AS A DANGEROUS GOODS
Marine pollutant:	NO

Proper Shipping Name: NOT CLASSIFIED AS A DANGEROUS GOODS

SECTION 15 – REGULATORY INFORMATION

Not dangerous for the ozone layer.
Volatile organic compounds (VOC's): N/D
NFPA: 1 1 0 - EPP: C

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 7 ('ST / SG / AC 10/30 / Rev.7') 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 2023) and amendments.
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID 2023) and amendments.
International Maritime Dangerous Goods Code (IMDG 2020 - Amendment 41-22), International Maritime Organization (IMO).
Regulations of the International Air Transport Association (IATA 64 ed., 2023) 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.14 - Adaptation to the GHS.

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.