



MATERIAL SAFETY DATA SHEET

(According to GHS rev. 5)

PEX-AE

1.IDENTIFICATION

Company: YPF S.A. Address: Av. Macacha Güemes n° 515 CP C1106BKK Buenos Aires - ARGENTINA Tel# (+ 5411) 5441-2000 Fax# (+ 5411) 5441-5796	Commercial name: PEX-AE
	Chemical name: Linear alkyl benzene.
	Synonyms: Linear alkyl benzene
	Emergency Telephone: Argentina: 0800-222-2933 Other countries: (+5411) 4613-1100

2.HAZARD IDENTIFICATION

2.1 LABEL ELEMENTS

Pictograms			
Warning word	Peligro		
Hazard statement	H304 May be fatal if swallowed and enters airways.	-	-
Classification criteria	Aspiration hazard - Category 1	-	-
Other regulations	-		

OTHER HAZARDS

Floats on water. It can obstruct sewers and water intakes.

3.COMPOSITION/INFORMATION ON INGREDIENTS

General composition: Linear alkyl benzene.

Main components	Range %	Classification	S Phrases
Benzene, C10-13-alkyl derivs. CAS# 67774-74-7 CE# 267-051-0	100		

4. FIRST-AID MEASURES

Inhalation:

For those providing assistance, avoid exposure. Use proper protection if necessary. Move victim and get fresh air. Keep calm. If not breathing, give artificial respiration. If having difficulty breathing, give oxygen. Get medical advice.

Ingestion/Aspiration:

DO NOT INDUCE VOMITING. Give water to drink. Never give anything by mouth to an unconscious person. Get medical advice. If vomiting occurs spontaneously, place victim on side to reduce the risk of aspiration.

Contact skin/eyes:

Skin contact: Wash immediately after contact with soap and water for at least 20 minutes. Remove contaminated clothing and wash before reuse.

Eye contact: Immediately flush with water for at least 20 minutes, holding eyelids apart to ensure that all eye and lid tissues rinsed. Washing eyes within several seconds is essential to achieve maximum effectiveness. If you have contact lenses, remove them after the first 5 minutes, then continue rinsing eye. Get medical advice.

General measures:

Avoid exposure to the product, taking appropriate protective measures. Medical advice: Symptomatic treatment. For more information, contact a Poison Center.

5. FIRE-FIGHTING MEASURES

Extinguishing agents: Foams, water spray and dry chemicals.

Non suitable extinguishing agents: WATER SHOULD NEVER BE USED DIRECTLY.

Combustion products: CO₂, H₂O and CO (in case of incomplete combustion).

Special measures: Move container from fire area if it can be done without risk. Apply cooling water to the containers sides exposed to flames until well after fire is out. Stay away from tank. In case of massive fire in cargo area, use unmanned hose holder or monitor nozzles; if fire goes out of control, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank wall due to fire. Consult and follow existing emergency standard procedures.

Special hazards: NP

Protective equipment: Firefighters' protective clothing. At high concentration of vapours and/or fumes, self-contained breathing apparatus will be needed.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: Avoid spillages in the environment. Avoid entrance in sewers and watercourse.

Personal precautions: Avoid prolonged contact with the product. Keep unnecessary people away. Avoid any ignition source.

Cleanup methods: Use absorbent materials and transfer to sealed containers for later disposal.

Personal protection: Suitable protective clothing, safety goggles and gloves.

7. HANDLING AND STORAGE

Handling:

General precautions: Wear suitable protective clothing, gloves and safety goggles to prevent skin and eyes contact with the product. In the areas where the product is stored, handled or used, keep all ignition sources away and do not smoke, eat or drink.

Specific conditions: Good local exhaust ventilation.

Specific Use: Industrial use.

Storage:

Temperature and decomposition products: NP

Dangerous reactions: NP

Storage conditions: Keep the product in properly sealed and labelled containers in cool and well-ventilated place. Keep them away from ignition sources and incompatible materials.

Incompatible materials: Oxidizers.

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection:

Eye protection: Safety goggles or face-shield to prevent eyes contact with the product.

Respiratory protection: Respiratory protection to prevent inhalation of vapours from heated product.

Skin protection: Gloves (Viton), suitable protective clothing.

Other protective equipment: Showers and eye-washers in working area.

General precautions: Good local exhaust ventilation. Avoid direct contact with the product.

Specific hygiene measures: Contaminated clothing should be changed immediately. Care should be taken to ensure proper skin cleaning by washing thoroughly with soap and water, followed by the application of a skin re-conditioning cream. Use skin reconditioning cream after work.

Exposure controls: NP

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid.	pH: N/D
Colour: N/D	Odour: Characteristic.
Boiling point: N/D	Melting/Freezing point: N/D
Flash point: 130°C mín. (ASTM D-92)	Autoignition temperature: N/D
Explosive properties: Not explosive. According to column 2 of Annex VII of REACH, this study is not required because: in the molecule no chemical groups are associated with explosive properties.	Oxidizing properties: According to column 2 of Annex XVII of REACH, this study is not necessary because: the substance, its chemical structure is incapable of reacting exothermically with combustible materials.
Vapour pressure: N/D	Density: 0.8600 g/cm ³ a 15°C (ASTM D-287)
Surface tension: N/D	Viscosity: (a 20°C) 9 cSt típico (ASTM D-445) (a 50°C) 3.5 cSt típico (ASTM D-445)
Vapour density: N/D	Partition coefficient (n-octanol/water): N/D
Water solubility: Insoluble.	Solubility: In organics solvents.
Other data: Dissipation factor at 100°C: 0.003 max. (IRAM 2340) Dielectric rigidity: 25 Kv min. (ASTM D-877)	

10. STABILITY AND REACTIVITY

Stability: Stable at room temperature.	Conditions to avoid: High temperatures and ignition sources.
Materials to avoid: Oxidizers.	
Hazardous decomposition/combustion products: CO ₂ , H ₂ O and CO (in case of incomplete combustion).	
Polymerizations risk: NP	Conditions to avoid: NP

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Inhalation. Skin and eyes contact. Ingestion is easy to avoid.
Acute and chronic effects: Slightly irritant in contact with skin or eyes.
Carcinogenicity: NP
Reproductive toxicity: No data available.
Medical conditions wich increase hazard to exposure: Dermatological problems.

12. ECOLOGICAL INFORMATION

Pollutant potential:

Persistence and degradability: The product has long hydrocarbon insoluble chains that make biodegradation process difficult.

Mobility/bioaccumulative potential: No data available on linear alkyl benzene bioaccumulative problems.

Ecotoxicological effects: No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods (surplus): Recycling when possible.

Waste: Liquids from industrial processes.

Disposal: Consult with authorized environmental regulatory agencies for guidance on acceptable disposal practices.

Handling: Contaminated materials should be regarded as toxic and dangerous waste and have the same risk and need the same precautions as the product. Do not run off the product to sewers.

Provisions: Companies that recover, dispose, store, transport or handle waste should comply with local and/or national provisions in force on waste management.

14. TRANSPORT INFORMATION

Special precautions: Stable at room temperature and during transport.

Additional Information:

LAND TRANSPORT:

Proper shipping name :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
UN Number :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Hazard class :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Hazard identification number :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Packing group :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Exempt amount :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION

AIR TRANSPORT (ICAO/IATA) :

Proper shipping name :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
UN Number :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Hazard class :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Packing group :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
CRE :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Passenger and cargo aircraft :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Cargo aircraft only :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION

MARITIME TRANSPORT (IMDG/IMO) :

Proper shipping name :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
UN Number :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Hazard class :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Packing group :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Marine pollutant :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Stowage and segregation :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION
Ems :	NOT CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORTATION

15. REGULATORY INFORMATION

CLASIFICACION: LABELLING
Symbols: NP
Phrases R: NP
Phrases S: NP

Other regulations: Linear alkyl benzene is listed in TSCA Inventory (EPA).

16. OTHER INFORMATION

Data Bases consulted

EINECS: European Inventory of Existing Commercial Substances.
TSCA: Toxic Substances Control Act, US Environmental Protection Agency
HSDB: US National Library of Medicine.
RTECS: US Dept. of Health & Human Services

R phrases show in the document:

Legislation consulted:

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Dir. 67/548/EEC about classification, labelling and packaging of dangerous substances (including amendments and adaptations in force).
Dir. 1999/45/EC about classification, labelling and packaging of dangerous preparations (including amendments and adaptations in force).
Dir. 91/689/EEC dangerous waste; Dir. 91/156/EEC waste management.
Royal Decree 363/95: Regulation about notification of new substances and classification, packaging and labelling of dangerous substances.
Royal Decree 255/2003: Regulation about classification, packaging and labelling of dangerous preparations.
European Agreement concerning the international carriage of dangerous goods by road (ADR).
Regulation on the international transport of dangerous goods on the railway. (RID)
International maritime code of dangerous goods. (IMDG)
International Air Transport Association (IATA) regulation pertaining to air shipment.

Glossary:

CAS: Chemical Abstract Service	VLA-EC: Valor Límite Ambiental – Exposición Corta
IARC: International Agency for Research on Cancer	LD ₅₀ : Lethal Dose Medium
ACGIH: American Conference of Governmental Industrial Hygienists.	LC ₅₀ : Lethal Concentration Medium
TLV: Threshold Limit Value	EC ₅₀ : Effective Concentration Medium
TWA: Time Weighted Average	IC ₅₀ : Inhibitory Concentration Medium
STEL: Short-term Exposure Level	BOD: Biological Oxygen Demand.
REL: Recommendable Exposure Limit	NP: Not Pertinent
PEL: Permissible Exposure Limit	: Changes from the last revision
INSHT: Instituto Nal. de Seguridad e Higiene en el Trabajo	[1502.162]
VLA-ED: Valor Límite Ambiental – Exposición Diaria	

The information given in this document has been compiled based on the best existing information sources, latest available knowledge and according to the current requirements on classification, packaging and labelling of hazardous substances. It does not imply the information is exhaustive or accurate in all cases. It is the user's responsibility to determine the validity of the information contained in this Material Safety Data Sheet to apply depending on the case.