



MATERIAL SAFETY DATA SHEET

(According to GHS rev. 5)




AROMÁTICO PESADO INDUSTRIAL

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: HEAVY AROMATIC INDUSTRIAL Chemical name:
	Hidrocarbon C8-C10 mixture, predominantly aromatic.
	Synonyms: -
	Emergency Telephone: Argentina: 0800-222-2933 Other countries: (+5411) 4613-1100

2.HAZARD IDENTIFICATION

2.1 LABEL ELEMENTS

Pictograms			
Warning word	Atención		
Hazard statement	H226 - Flammable liquid and vapour.	H335 - May cause respiratory irritation.	H411 - Toxic to aquatic life with long lasting effects.
Classification criteria	Flammable liquid (Category 3)	Specific target organ toxicity - single exposure (Category 3)	Hazardous to the aquatic environment (long-term) (category 2)
Other regulations	-		
OTHER HAZARDS			
Flammable liquid. Air way irritant. Toxic for aquatic life.			

3.COMPOSITION/INFORMATION ON INGREDIENTS

General composition:

Main components	Range %	Classification	S Phrases
1,3,5-Trimethylbenzene CAS # 108-67-8 CE # 203-604-4	10 - 15	R10/R37 R51/53 .	S9 S61 .
1,2,4-Trimethylbenzene + TerbutylBenzene CAS # 95-63-6 CE # 202-436-9	40 - 48	R10/R37 R51/53 .	S9 S61 .
1-Etil-3-Methylbenzene CAS # 620-14-4 CE # 210-626-8	10 - 20	R10/R37 R51/53 .	S9 S61 .
1,2,3-Trimethylbenzene CAS # 526-73-8 CE # 208-394-8	5 - 10	R10/R37 R51/53 .	S9 S61 .
1-Ethyl-4-Methylbenzene CAS # 622-96-8 CE # 210-761-2	5 - 10	R10/R37 R51/53 .	S9 S61 .
Propylbenzene CAS # 103-65-1 CE # 203-132-9	1 - 5 5 - 10	R10/R37 R51/53 .	S9 S61 .
1-Ethyl-2-Methyl Benzene CAS # 611-14-3 CE # 210-255-1		R10/R37 R51/53	S9 S61

4. FIRST-AID MEASURES

Inhalation: Move the affected person to fresh air. If breathing is difficult, apply artificial respiration or administer oxygen. Call for medical attention.

Ingestion/Aspiration: DO NOT INDUCE VOMITING to avoid liquid aspiration into lungs. If conscious, have the victim drink water or milk. Call for medical attention.

Contact skin/eyes: Remove contaminated clothing as soon as possible. Flush the affected areas with soap and water. In. contact with eyes, flush with plenty of water for at least 15 minutes. Call for medical attention.

General measures: Call for medical attention.

5. FIRE-FIGHTING MEASURES

Extinguishing agents: Foams, dry chemicals, CO₂ and water spray.

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

Combustion products: CO₂, H₂O. CO and toxic/irritant vapours in case of incomplete combustion.

Special measures: Move containers away from fire area. Keep fire-exposed containers cool. In case of massive fire, withdraw from area and let fire burn. Consult and follow existing emergency standard procedures.

Special hazards: Flammable/combustible liquid. May be ignited by heat, sparks, static electricity or flames. Vapour forms explosive mixtures with air. Vapours are heavier than air and may travel to a remote source of ignition and flash back. Empty containers may explode in heat of fire. Vapour explosion hazard indoors and outdoors. Runoff to drains or sewers may create fire and explosion hazard.

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: Prevent entry into sewers and waterways.

Personal precautions: Isolate the area. Keep unnecessary people away. Keep out of low confined areas where vapours can accumulate. Eliminate all ignition sources. Avoid electrostatic charges.

Cleanup methods: Small spillages: Take up with non-combustible absorbent materials. Transfer to sealed containers for later disposal. If possible, clean the contaminated ground.

Personal protection: Impervious polyvinyl chloride gloves. Safety antistatic footwear. Safety goggles, in case of risk of splashing material to eyes. Self-contained breathing apparatus may be needed at high vapour concentration.

Large spillages: Cover the spill with foam to avoid vapours cloud formation. Dike far ahead of liquid spill and proceed as if were a small spillage.

7. HANDLING AND STORAGE

Handling:

General precautions: Wear suitable protective clothing, gloves and safety goggles to prevent skin and eyes contact with the product and use respiratory protection to prevent exposure by inhalation. In the areas where the product is stored, handled or used, keep all ignition sources and incompatible materials away and do not smoke. Product transfer must be done in earthed, airtight conducts. Electrically ground all equipment when handling this product and use only non-sparking tools.

Specific conditions: Good antisparking ventilation system. Special procedures during bulk loading, cleaning and maintaining the tanks to avoid vapour exposure. Make sure that tanks have been thoroughly purged before performing any cleaning or maintaining procedure.

Specific Use: Solvent.

Storage:

Temperature and decomposition products: When heated to decomposition, it emits irritating fumes.

Dangerous reactions: Flammable liquid.

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: Oxidants.

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection:

Eye protection: Safety goggles or face-shield to avoid splashes. Eye-wash fountains.

Respiratory protection: Protective mask with organic vapour cartridge or self contained breathing apparatus at high vapour concentrations.

Skin protection: Impervious gloves resistant to chemical product. Antistatic safety footwear.

Other protective equipment: Showers in the work area.

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

Specific hygiene measures: Soaked clothing should be drenched with water under a shower (because of fire risk) and then removed as soon as possible, keeping away from any source of ignition. Care should be taken to ensure proper skin cleaning by washing thoroughly with soap and water.

Exposure controls: TLV/TWA (ACGIH): 25 ppm
MAK: 20 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:Liquid.

pH: NP

Colour:

maximum 40 (Pt-Co Scale)

Odour: Aromatic.

Boiling point: 150-220°C (302-428°F)

Melting/Freezing point:

No available.

Flash point: 38°C (100°F) min.

Autoignition temperature:

Explosive properties: Lower explosive limit: 0.6%
Upper explosive limit: 6.1%

Oxidizing properties: NP

Vapour pressure: 2.10 mm Hg at 25°C

Density: 0.86-0.89 g/cm³ at 20°C

Surface tension:

Viscosity:

Vapour density: 4.10-4.15 (air: 1)

Partition coefficient (n-octanol/water): Log Kow: 3.78

Water solubility: Insoluble.

Solubility: Petroleum solvents.

Other data: Molecular weight: 120.19 g/mol

10. STABILITY AND REACTIVITY

Stability: Flammable liquid.

Conditions to avoid: Exposure to flames, heat, sparks and static electricity.

Materials to avoid: Strong oxidants.

Hazardous decomposition/combustion products: CO₂, H₂O, CO (in incomplete combustion) and toxic vapours.

Polymerizations risk: NP

Conditions to avoid: NP

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Inhalation, skin and eyes contact, accidental ingestion.

Acute and chronic effects: It may produce respiratory tract irritation and eyes and skin irritation. Aspiration into lungs may cause lung damage.

Carcinogenicity: NP

Reproductive toxicity: No data available.

Medical conditions wich increase hazard to exposure: Respiratory deficiencies and dermatological problems.

12. ECOLOGICAL INFORMATION

Pollatant potential:

Persistence and degradability: No data available.

Mobility/bioaccumulative potential: No data available.

Ecotoxicological effects: No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods (surplus): Combustion or incineration. Large quantities may be collected and reclaimed.

Waste:

Disposal: Highly contaminated materials should be incinerated. Less contaminated materials may be acceptable for authorized landfill sites. 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. Half-empty containers are as dangerous as full ones.

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 during transport.

Additional Information:

LAND TRANSPORT:

Proper shipping name :	PETROLEUM DISTILLATES, N.O.S.
UN Number :	1268
Hazard class :	3
Hazard identification number :	30
Packing group :	III
Exempt amount :	5L / E1

AIR TRANSPORT (ICAO/IATA) :

Proper shipping name :	PETROLEUM DISTILLATES, N.O.S.
UN Number :	1268
Hazard class :	3
Packing group :	III
CRE :	3L
Passenger and cargo aircraft :	Y344/355
Cargo aircraft only :	366

MARITIME TRANSPORT (IMDG/IMO) :

Proper shipping name :	PETROLEUM DISTILLATES, N.O.S.
UN Number :	1268
Hazard class :	3
Packing group :	III
Marine pollutant :	YES
Stowage and segregation :	Category A
Ems :	F-E S-E

15.REGULATORY INFORMATION

CLASIFICACION: LABELLING

Symbols: F

Phrases R: R10: Flammable.
R37: Air way irritating.
R51/53: Toxic for aquatic life.

Phrases S: S9: Keep container in a well-ventilated place.
S61: Avoid environmental release.

Other regulations: Trimethylbenzene 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	1406.001
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.