



MATERIAL SAFETY DATA SHEET

(According to GHS rev. 4)




SOLVENTE B

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: SOLVENT B Chemical name: Solvent (petroleum).
	Synonyms: Naphtha (petroleum), sweetened light. Low boiling point naphtha – unspecified .
	Emergency Telephone: Argentina: 0800-222-2933 Other countries: (+5411) 4613-1100

2.HAZARD IDENTIFICATION

2.1 LABEL ELEMENTS

Pictograms			
Warning word	Peligro		
Hazard statement	H225 Highly flammable liquid and vapour.	H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H361 Suspected of damaging fertility or the unborn child	H411 Toxic to aquatic life with long lasting effects.
Classification criteria	Flammable liquids 2	Skin irritation 2 Aspiration hazard 1 Reproductive toxicity 2 Specific target organ toxicity - single exp. 3	Hazardous to the aquatic environment (long-term) 2
Other regulations			

OTHER HAZARDS

Vapour forms explosive mixtures with air.
Vapour is heavier than air and may travel to remote ignition sources and flash back.

3.COMPOSITION/INFORMATION ON INGREDIENTS

General composition: A complex combination of hydrocarbons obtained by subjecting a petroleum naphtha to a sweetening process to convert mercaptans or to remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C5 through C8 and boiling in the range of approximately 40 °C to 141 °C.

Main components	Range %	Classification	S Phrases
Naphtha (petroleum), sweetened light; Low boiling point naphtha - unspecified (benzene < 0.1%). CAS # 101795-01-1 CE # 309-976-5	100	F; R11 Xi; R38 Xn; R65 R67 N; R51/53	S23-24-29 43-61-62

4. FIRST-AID MEASURES

Inhalation: Move the affected person to fresh air. If breathing is difficult, administer oxygen; in case of respiratory arrest, apply artificial respiration. Call for medical attention.

Ingestion/Aspiration: DO NOT INDUCE VOMITING. Call for medical attention urgently.

Contact skin/eyes: Remove contaminated clothing. Wash the affected area thoroughly with soap and water. Call for medical attention . Flush with copious amounts of water for up to 15 minutes. Call for medical attention.

General measures: Call for medical attention urgently.

5. FIRE-FIGHTING MEASURES

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

WATER SHOULD NEVER BE USED DIRECTLY.

Non suitable extinguishing agents: NP

Combustion products: CO₂ and H₂O; CO and toxic/irritant vapours, 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: Highly flammable /combustible liquid. Vapours may form explosive mixtures with air. May be ignited by heat, sparks, static electricity or flames. Vapour may travel to remote ignition sources and flash back. Empty containers may explode in heat of fire. Vapour explosion hazard indoors, outdoors or in sewers. 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: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Cleanup methods: Small spillages: Take up with non-combustible absorbent materials. Transfer to sealed containers for later disposal.
Large spillages: Avoid product dispersion with mechanical barriers. Dike far ahead of liquid spill and aspirate liquid into closed containers for later disposal.

Personal precautions: Isolate the area. Avoid vapour inhalation and skin and eye contact with the product. Eliminate all ignition sources. Do not smoke in the area.

Personal protection: Self-contained breathing apparatus, suitable protective clothing, safety goggles and gloves to prevent contact with the product.

7. HANDLING AND STORAGE

Handling:

General precautions: Good local exhaust ventilation in confined areas (according to legislation in force) to avoid vapours, mists or aerosols formation. Avoid exposures to vapours. During transfer use gloves and goggles in case of risk of splashes. Do not smoke in the areas where the product is handled. Earthed equipment is needed during transfer.

Specific conditions: 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. If nitrogen has been used for purging, eliminate completely the nitrogen atmosphere before entering the tank. Nitrogen may cause immediate loss of consciousness.

Specific Use: Solvent.

Storage:

Temperature and decomposition products: The product decomposition may emit toxic and irritant fumes

Dangerous reactions: Highly flammable material.

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

Incompatible materials: Strong oxidants and acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection:

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

Respiratory protection: At high vapours concentration, self-contained breathing apparatus will be needed.

Skin protection: Solvent resistant gloves, suitable protective clothing and appropriate footwear are recommended.

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

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

Specific hygiene measures: Contaminated clothing should be changed immediately. Good work practices and the adoption of good personal hygiene measures reduce unnecessary exposures. 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.

Exposure controls:

TLV/TWA (ACGIH): 300 ppm

TLV/ STEL (ACGIH): 5 00 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid.	pH: NP
Colour: 20 (Saybolt).	Odour: Characteristic.
Boiling point: 40-141°C	Melting/Freezing point: NP
Flash point: <0°C (ASTM D-56)	Autoignition temperature: NP
Explosive properties: NP	Oxidizing properties: NP
Vapour pressure: NP	Density: 0.680 g/cm ³ typical
Surface tension: NP	Viscosity: NP
Vapour density: NP	Partition coefficient (n-octanol/water): NP
Water solubility: Insoluble.	Solubility: Miscible with benzene, alcohol, ether, chloroform and carbon disulphide.
Other data:	

10. STABILITY AND REACTIVITY

Stability: Stable at room temperature. Highly flammable material at room temperature in presence of ignition sources.	Conditions to avoid: Exposure to flames, sparks or high temperatures.
Materials to avoid: Strong oxidants and acids.	
Hazardous decomposition/combustion products: CO ₂ , H ₂ O, CO (in incomplete combustion), unburned hydrocarbons.	
Polymerizations risk: NP	Conditions to avoid: NP

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Inhalation. Contact with skin, eyes and ingestion.
Acute and chronic effects: Harmful: may cause lung damage if swallowed. Irritating to skin. Vapours and mists may cause respiratory tract irritation, drowsiness and dizziness. Repeated and prolonged exposures to high concentrations of vapours result in central nervous system damage.
Carcinogenicity: Contains less than 0.1% of Benzene
Reproductive toxicity: This product is probably a mammalian reproductive toxin.
Medical conditions which increase hazard to exposure: Respiratory deficiencies and dermatological problems. Avoid the use of epinephrine because of possible adverse effects on the sensitized myocardium. Antibiotics are used if there is a specific indication, such as bacterial pneumonitis. Alcohol should not be ingested because it promotes intestinal absorption.

12. ECOLOGICAL INFORMATION

Pollutant potential: -

Persistence and degradability: Biodegradation is expected to be the main fate process in soil and water. The rate of biodegradation depends on the temperature, the presence of a sufficient number of microorganisms capable of metabolizing the hydrocarbons and the concentration of product in or on soil or water. C₇ to C₁₂ hydrocarbons biodegradation is expected to be significant under environmental conditions favourable to microbial oxidation.

Mobility/bioaccumulative potential: The potential for bioaccumulation in aquatic or terrestrial ecosystems depends on the bioaccumulation potential of the individual hydrocarbon components. Water-soluble aliphatic and aromatic compounds may be expected to have low bioconcentration factors based on their octanol water partition coefficients.

Ecotoxicological effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Disposal methods (surplus): Incineration or recycling when possible.

Waste: Liquids and solids from industrial processes or other uses.

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: Highly flammable liquid. Stable at usual transport conditions.

Additional Information:

LAND TRANSPORT:

Proper shipping name :	PETROLEUM DISTILLATES N.O.S OR PETROLEUM PRODUCTS, N.O.S
UN Number :	1268
Hazard class :	3
Hazard identification number :	33
Packing group :	II
Exempt amount :	333Kg

AIR TRANSPORT (ICAO/IATA) :

Proper shipping name :	PETROLEUM DISTILLATES N.O.S OR PETROLEUM PRODUCTS, N.O.S
UN Number :	1268
Hazard class :	3
Packing group :	II
CRE :	3H
Passenger and cargo aircraft :	Y341/353
Cargo aircraft only :	364

MARITIME TRANSPORT (IMDG/IMO) :

Proper shipping name :	PETROLEUM DISTILLATES N.O.S OR PETROLEUM PRODUCTS, N.O.S
UN Number :	1268
Hazard class :	3
Packing group :	II
Marine pollutant :	NO
Stowage and segregation :	Category B
Ems :	F-E; S-E

15. REGULATORY INFORMATION

CLASIFICACION: LABELLING

Symbols: F, Xn, N.

Phrases R: R11 : Highly flammable.

R38: Irritating to skin.

R65: Harmful: may cause lung damage if swallowed.

R67: Vapours may cause drowsiness and dizziness.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

F; R 11

Xn; R65

Xi; R38

R67

N; R51/53

Phrases S: S23: Do not breathe vapour.

S24: Avoid contact with skin.

S29: Do not empty into drains.

S43: In case of fire use water spray, foam, dry chemical or CO2. Water jets must never be used.

S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Other regulations: The product 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	[1312.017]
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.