

SECTION 1 - IDENTIFICATION

1.1 Product identifier

Product name: **O-XILENO**

Product Identifier:

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

Relevant identified uses: Synthesis of phthalic anhydride and polyester and alkyd resins. Aircraft fuel. Solvent.

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 2)

Acute toxicity, inhalation (Category 4)

Acute toxicity, dermal (Category 4)

Skin irritation (Category 2) - Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3)

Aspiration hazard (Category 1)

Short-term (acute) aquatic hazard (Category 2)

Long-term (chronic) aquatic hazard (Category 3)

2.2 Label elements

Pictogram:



Signal word:

DANGER

Hazard statements:

H225 - Highly flammable liquid and vapour.

H304 - May be fatal if swallowed and enters airways.

H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H401 + H412 - Toxic to aquatic life with long lasting effects.

Precautionary statements:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing fume, mist, vapours and spray.
P264 - Wash thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves.
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 - IF EXPOSED OR CONCERNED: Get medical advice or attention.
P337 + P313 - IF EYE IRRITATION PERSISTS: Get medical advice or attention.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P370 + P378 - IN CASE OF FIRE: Use water spray, foam, dry chemical or carbon dioxide to extinguish.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents and/or container in accordance with national and international regulations.

2.3 Other hazards

There are no other additional hazards of consideration in the classification.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Substance**

o-Xylene (CAS 95-47-6): 100% - Flam. Liquid 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; STOT Single Exp. 3; Asp. Tox. 1; Aquatic Acute 2; Aquatic Chronic 3

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 artificial respiration. Call the doctor.
Skin contact:	Immediately wash skin with plenty of soap and water for at least 15 minutes.

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: may cause nausea, vomiting, and stomach upset.

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 (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.

This material can accumulate static electric charges that can cause an electrical spark (source of ignition). Place the container to earth during filling and maintain contact with it. Do not use electronic equipment in the vicinity of filling areas, unless they are properly certified as safe.

7.2 Conditions for safe storage, including any incompatibilities

Store in a clean, dry, well-ventilated area. Protect from sunlight.

The type of container used to store the material can affect the accumulation and dissipation of electrostatic charges.

The stored containers must be grounded and bonded together. The fixed containers, the transfer containers and their associated equipment must be grounded and bonded to prevent the accumulation of electrostatic charge.

Other information: The vapors present in the container may be at the explosion / flammability limit and, therefore, be flammable.

Packaging materials:

supplied by the manufacturer. Xylene attacks plastics and rubbers, disintegrating them.

Incompatibilities:

Keep away from Oxidizing mineral acids, strong oxidizing agents. Avoid contact with chlorine, bromine and fluorine. Xylene attacks plastics and rubbers, disintegrating them.

7.3 Specific end use(s)

Synthesis of phthalic anhydride and polyester and alkyd resins. Aircraft fuel. Solvent.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

TLV-TWA (ACGIH):	20 ppm [2021]
TLV-STEL (ACGIH):	N/D
PEL (OSHA):	100 ppm
REL:	100 ppm
REL-STEL:	150 ppm
IDLH (NIOSH):	900 ppm

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, PVA or Viton - do not use butyl, rubber, neoprene, nitrile or PVC - 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:	Liquid.
Colour:	Colourless.
Odour:	Aromatic, sweet.
Odour threshold:	N/D
pH:	N/D
Melting point:	-25°C (-13°F)

Boiling point:	144°C (291°F)
Evaporation rate:	2,8 (diethylether = 1)
Flammability:	The product is flammable.
Flash point:	17°C (62,6°F)
Explosive limits:	1,0% - 6,0%
Auto-ignition temperature:	530°C (986°F)
Decomposition temperature:	N/D
Vapour pressure (25°C):	6,8 mmHg
Vapour density (air=1):	N/D
Relative density (20°C):	0,880 g/cm ³
Solubility (20°C):	Insoluble in water. Miscible with alcohol, ether and acetone.
Partition coefficient (logKo/w):	N/D
Viscosity (20°C):	N/D
Henry constant (20°C):	N/D
Explosive properties:	Not explosive. This study is not required because in the molecule no chemical groups are associated with explosive properties.
Oxidizing properties:	This study is not necessary because the substances present in the product, due to their chemical structures, are incapable of reacting 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 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.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Keep away from Oxidizing mineral acids, strong oxidizing agents. Avoid contact with chlorine, bromine and fluorine. Xylene attacks plastics and rubbers, disintegrating them.

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.): > 5000 mg/kg

LD50 der (bibl.): 1500 mg/kg

LC50 inh. (4 hs., bibl.): 1,5 mg/l

Skin irr. (rabbit, bibl.): irritant

Eye irr. (rabbit, bibl.): irritant

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

Resp. sens (Guinea pig, bibl.): 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: May cause respiratory tract irritation.

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: The product is toxic by aspiration and its viscosity makes it possible to incorporate it 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 nausea, dizziness and headache.

Skin contact: may cause irritation.

Eye contact: may cause irritation.

Ingestion: may cause nausea, vomiting, and stomach upset.

SECTION 12 – ECOLOGICAL INFORMATION

12.1. Toxicity

Bibliographic data of its component are presented for reference.

EC50 (fish, 96 h): 2,6 mg/l

EC50 (inv., bibl., 48 h): 4,7 mg/l

EC50 (algae, bibl., 72 h): 2,2 mg/l
NOEC (fish, bibl., 14 d): 1,3 mg/l
NOEC (inv., bibl., 14 d): 1,57 mg/l
PNEC (water): N/D
PNEC (sea): N/D
PNEC-STP: N/D

12.2. Persistence and degradability

BIODEGRADABILITY (OECD): The product is readily biodegradable.

12.3. Bioaccumulative potential

Log K_{ow} : N/D

BIOCONCENTRATION FACTOR - BCF (OCDE 305): 14 to 26 - Suggests that the potential for bioconcentration in aquatic organisms is low.

12.4. Mobility in soil

HENRY CONSTANT (20°C): N/D

LogKoc: N/D In water, the product floats and has the potential for physical contamination, although it can volatilize or adsorb to sediments or materials suspended in the water. It has moderate mobility in the soil. In the atmosphere, xylene reacts with photochemically produced hydroxyl radicals, having a half-life of 1 to 2 days..

12.5. Results of PBT and vPvB assessment

There is no test data, but it is believed that this product does not meet the PBT criteria of Annex XIII of the REACH regulation.

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:	XYLENES
UN/ID Number:	1307
Hazard class:	3
Packing group:	II
Hazard identification number:	33
Excepted and limited quantity:	1 L / E2
Special provisions:	-



14.2 Air transport (ICAO/IATA)

Proper Shipping Name:	XYLENES
UN/ID Number:	1307
Hazard class:	3
Packing group:	II
PAX and Cargo Packing instructions:	Y341; 1L / 353; 5L
Cargo Packing instructions:	364; 60L
ERC:	3L
Special provisions:	A3



14.3 Sea transport (IMO)

IMDG Code

Proper Shipping Name:	XYLENES
UN/ID N°:	1307
Hazard class:	3
Packing group:	II
EMS:	F-E, S-D
Stowage and manipulation:	Category B
Segregation:	—
Marine pollutant:	NO

Proper Shipping Name: UN1307; XYLENES; Class 3; PG II; Flash point 17°C (62,6°F) c.c.



SECTION 15 – REGULATORY INFORMATION

Not dangerous for the ozone layer.

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

NFPA: 2 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 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) 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 analogy with other products, and based on product data in CIQUIME database.

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.13 - Phrase and format update.

V.12 - Adaptation to the GHS.

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.