
Safety Data Sheet

Product Name	Triton X-100
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**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF
THE COMPANY/UNDERTAKING**

1.1 Product identification:**Product Description:** Triton X-100**Synonyms:** Polyethylene glycol octylphenyl ether; Octylphenoxy polyethoxyethanol; Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl) phenyl] ether**CAS-No:** 9002-93-1**EC-No.:** Not available**Molecular Formula:** $(C_2H_4O)_n C_{14}H_{22}O$ **REACH Registration No:** A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.**1.2 Relevant identified uses of the substance or mixture and uses advised against:****Recommended Use:** Laboratory chemicals**1.3 Details of the supplier of the safety data sheet:**

- **Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
Web: www.finarchemicals.com
- **E-Mail Address** safety.finar@aceto.com; info.finar@aceto.com

1.4 Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717

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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label Elements:

Labeling according Regulation (EC) No 1272/2008

Pictogram



Signal word: **Danger**

Hazard statement(s)

H302 Harmful if swallowed

H315 Causes skin irritation

H318 Causes serious eye damage

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear eye protection/ face protection.

P301 + P312 **IF SWALLOWED:** Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P302 + P352 **IF ON SKIN:** Wash with plenty of water.

P305 + P351 + P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

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Supplemental Hazard information (EU)

None

Reduced labelling (≤125 ml)

Pictogram



Signal word: **Danger**

Hazard statement(s)

H318 Causes serious eye damage

Precautionary statement(s)

P280 Wear eye protection/ face protection.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Supplemental Hazard information (EU)

None

2.3 Other Hazards:

None Known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances: Triton X-100

3.2 Mixtures:

Component	CAS-No	EC-No.	Weight %
Triton X-100	9002-93-1	---	>95 %

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

- **General advice**
Consult a physician. Show this Safety data sheet to the doctor in attendance.
- **If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **If case of skin contact**
Wash off with soap and plenty of water. Consult a physician.
- **In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- **If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed:

Causes severe eye damage.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable Extinguishing Media-

Water, Foam, Carbon dioxide (CO₂), Dry Powder

Unsuitable Extinguishing Media-

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture:

Carbon oxides

Combustible

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

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5.3 Advice for firefighters:

Stay in danger area only with self-contained breathing apparatus.

Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information:

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact.

Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material and neutralising material.

Dispose of properly. Clean up affected area.

6.4 Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:**Advice on safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

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7.2 Conditions for safe storage, including any incompatibilities:

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Packaged under inert gas.

7.3 Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Ingredients with workplace control parameters

8.2 Exposure Controls:

Appropriate Engineering Controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentration and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

- **Eye & Face Protection-**

Tightly fitting safety goggles. Face shield (8-inch minimum).

- **Hand Protection -**

Full Contact: -

Glove Material : Nitrile Rubber

Glove thickness : 0.11 mm

Break through time: 480 min

Splash Contact: -

Glove material : Nitrile Rubber

Glove thickness : 0.11 mm

Break through time: 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 706 Lapren® (splash contact).

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The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

- **Body Protection-**

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

- **Respiratory Protection-**

Required when vapours/aerosols are generated.

Recommended Filter type: Filter ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

- **Environmental Exposure Controls-**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

- **Appearance:** Colorless
- **Physical State:** Liquid
- **Odor:** Characteristic
- **Odor Threshold:** No data available
- **pH:** 9.7 at 10 g/l at 20 °C
- **Melting Point:** 6 °C
- **Initial Boiling Point/Range:** > 200 °C at 1.013 hPa
- **Flash Point:** 251 °C Closed up
- **Evaporation Rate:** No data available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Vapor Pressure:** 1.33 hPa at 20 °C

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- **Vapor Density:** No data available
- **Specific Gravity / Relative Density:** 1.067 g/cm³ at 20°C
- **Water Solubility:** at 20 °C Soluble
- **Partition Co-efficient: n-octanol/Water:** No data available
- **Auto-Ignition Temperature:** No data available
- **Decomposition Temperature:** No data available
- **Viscosity, Dynamic:** No data available
- **Viscosity, Kinematic:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Molecular Weight:** 646.85 g/mol

9.2 Other information:

Molecular Formula: (C₂H₄O)_nC₁₄H₂₂O

SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity: -**

Reactivity Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability:

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions:

Violent reactions possible with:

Strong oxidizing agents

Strong acids

10.4 Conditions to avoid:

Incompatible products. Excess heat. Exposure to air. Exposure to light. Exposure to moisture.

10.5 Incompatible materials:

Strong oxidizing agents, Strong acids, Strong reducing agents

10.6 Hazardous decomposition products:

Carbon monoxide (CO), Carbon dioxide (CO₂), Aldehydes, Ketones, Formaldehyde, peroxides

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SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute Oral toxicity**

LD50 Oral - Rat - 1900 - 5000 mg/kg

The value is given in analogy to the following substances: Octylphenol polyethoxyethanol

Acute dermal toxicity

LD50 Dermal - Rabbit - > 3000 mg/kg

Skin corrosion / irritation

Skin - Rabbit

Result: Irritating – 4 h

(OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl) phenol

Serious eye damage / Eye irritation

Eyes: Rabbit

Result: Risk of serious damage to eyes

(Draize Test)

Remarks: Risk of corneal clouding.

Respiratory or skin Sensitisation

Sensitisation test: - Human

Result: Negative

Remarks: The value is given in analogy to the following substances: Octylphenol polyethoxyethanol

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test)

Test system: Mouse lymphoma test

Result: Negative

Remarks: (Lit.)

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

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Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further Information:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Handle in accordance with good industrial hygiene and safety practice

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

Semi-static test LC50 - *Leuciscus idus* (Golden orfe) - 0.26 mg/l; 96 h
(OECD Test Guideline 203)

Remarks: The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl) phenol

Toxicity to daphnia and other aquatic invertebrates

Static test EC50 - *Daphnia magna* (Water flea): 0.011 mg/l; 48 h (Lit.)

Remarks: (ECOTOX Database)

The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl) phenol

Toxicity to algae

Static test EC50 - *Pseudokirchneriella subcapitata* (green algae) - 1.9 mg/l - 96 h

Remarks: (ECHA)

The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl) phenol

12.2 Persistence and degradability:

Biodegradability: - Aerobic - Exposure time 28 d

Result: > 95 % - Readily biodegradable.

(OECD Test Guideline 301C)

Chemical Oxygen Demand (COD): - 2.19 mg/g

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12.3 Bioaccumulate potential:

No bioaccumulation is to be expected (log Pow \leq 4)

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment

Substances does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Other adverse effects:

Very toxic to aquatic life with long lasting effects.

Causes endocrine disruption.

Discharge into the environment must be avoided.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:**Product:**

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging:

Dispose of as unused product.

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SECTION 14: TRANSPORT INFORMATION

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	UN 3082		
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tertiaryOctylphenoxy polyethyl alcohol)		
14.3 Class	9		
14.4 Packing group	III		
14.5 Environmentally Hazardous	Yes		
14.6 Special precautions for user	N/A		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Packages smaller than or equal to 5 kg/L, not dangerous goods of Class 9			

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

National Legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : - Environmental Hazards

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

Training advice

Provide adequate information, instruction and training for operators.

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References: Not available

Created: 28/09/2021

Disclaimer:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Finar Limited be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Finar Limited has been advised of the possibility of such damages.