

Classified as hazardous according to criteria of EPA New Zealand

Section 1 - Identification

Product Name Triton X100

Synonyms Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl] ether

| | |
|--------------------------------|---|
| Product Code | ACR21568, ACR32737, AJA1552, ALFA16046, APPA1388, APPA4975, FSBBP151, FSBT/3751, FSBT/3753 |
| Address | Thermo Fisher Scientific New Zealand Ltd 244 Bush Road, Albany, Auckland, New Zealand |
| Emergency Tel. | CHEMTREC@ 09 980 6780 or +64 9 980 6780 |
| Telephone / Fax Numbers | Tel: 09 980 6700 Fax: 09 980 6788 |
| E-mail address | NZinfo@thermofisher.com |

Recommended Use Laboratory chemicals.

Section 2 - Hazard(s) Identification

Classification under Work Safe New Zealand

- 6.1D - Substances that are acutely toxic (Oral)
- 8.3A - Substances that are corrosive to ocular tissue
- 6.3B - Substances that are mildly irritating to the skin
- 9.1A - Substances that are very ecotoxic in the aquatic environment
- 9.3C - Substances that are harmful to terrestrial vertebrates

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HSNO Approval Number **HSR003221**

GHS Classification

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

| | |
|-----------------------------------|------------|
| Acute Oral Toxicity | Category 4 |
| Skin Corrosion/Irritation | Category 3 |
| Serious Eye Damage/Eye Irritation | Category 1 |

Environmental hazards

| | |
|--------------------------|------------|
| Acute aquatic toxicity | Category 1 |
| Chronic aquatic toxicity | Category 1 |

Label Elements**Signal Word****Danger****Hazard Statements**

H302 - Harmful if swallowed
 H318 - Causes serious eye damage
 H316 - Causes mild skin irritation
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H433 - Harmful to terrestrial vertebrates

Precautionary Statements

P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a POISON CENTER or doctor/physician
 P330 - Rinse mouth
 P403 - Store in a well-ventilated place
 P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

Section 3 - Composition and Information on Ingredients

| Component | CAS-No | Weight % |
|--|-----------|----------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | 9002-93-1 | 100 |

Section 4 - First Aid Measures

| | |
|---|---|
| Inhalation | Remove to fresh air. Get medical attention. If not breathing, give artificial respiration. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| General Advice | If symptoms persist, call a physician. |
| Self-Protection of the First Aider | Use personal protective equipment as required. |
| First Aid Facilities | Eyewash, safety shower and washroom. |
| Most important symptoms and | Causes eye burns. Causes severe eye damage. |

effects

Notes to Physician Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 - Accidental Release Measures

Emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.

Environmental Precautions

Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

Section 8 - Exposure Controls and Personal Protection

Exposure limits

The product does not contain any hazardous materials with occupational exposure limits established.

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment**Eye Protection**

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | AUS/NZ Standard | Glove comments |
|--|-----------------------------------|-----------------|-----------------|-----------------------|
| Natural rubber, Nitrile rubber, Neoprene, PVC. | See manufacturers recommendations | - | AS/NZS 2161.1 | (minimum requirement) |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection

Long sleeved clothing

Respiratory Protection

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

Recommended Filter type:

Organic gases and vapours filter Type A Brown conforming to EN14387 (or AUS/NZ equivalent)

Recommended half mask:-Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent)
When RPE is used a face piece Fit Test should be conducted**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

| | | |
|--|--------------------------|--|
| Appearance | Clear | |
| Physical State | Liquid | |
| Odor | mild | |
| Odor Threshold | No data available | |
| pH | 6 - 8 | (5 %) |
| Melting Point/Range | No data available | 6 °C / 42.8 °F |
| Softening Point | No data available | |
| Boiling Point/Range | 270 °C / 518 °F | |
| Flash Point | 274 °C / 525.2 °F | Method - No information available |
| Evaporation Rate | negligible | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |
| Vapor Pressure | < 1 mmHg @ 20 °C | |
| Vapor Density | 2.5 (Air = 1.0) | (Air = 1.0) |
| Specific Gravity / Density | 1.067 | |
| Bulk Density | Not applicable | Liquid |
| Water Solubility | No information available | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| Poly(oxy-1,2-ethanediyl), | 2.7 | |
| .alpha.-[4-(1,1,3,3-tetramethylbutyl)phe | | |

| | |
|----------------------------------|--------------------------|
| nyl]-.omega.-hydroxy- | |
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |
| Explosive Properties | No information available |
| Oxidizing Properties | No information available |

Other information

| | |
|--------------------------|-----------|
| Molecular Formula | C34H62O11 |
| Molecular Weight | 646.86 |

Section 10 - Stability and Reactivity

| | |
|---|--|
| Reactivity | None known, based on information available |
| Stability | Hygroscopic. |
| Conditions to Avoid | Incompatible products, Excess heat, Exposure to moisture. |
| Incompatible Materials | Strong oxidizing agents, Strong acids, Strong reducing agents. |
| Hazardous Decomposition Products | Carbon monoxide (CO). Carbon dioxide (CO ₂). |
| Hazardous Polymerization | Hazardous polymerization does not occur. |

Section 11 - Toxicological Information

Information on Toxicological Effects**Product Information****(a) acute toxicity;**

| | |
|-------------------|-------------------|
| Oral | Category 4 |
| Dermal | No data available |
| Inhalation | No data available |

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|--------------------|-------------|-----------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]- .omega.-hydroxy- | 1800 mg/kg (Rat) | | |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

| | |
|--------------------|-------------------|
| Respiratory | No data available |
| Skin | No data available |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

(g) reproductive toxicity; There are no known carcinogenic chemicals in this product

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

| | |
|---|--|
| Target Organs (j) aspiration hazard; | No information available. No data available |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |
| Symptoms / effects, both acute and delayed | No information available |

Section 12 - Ecological Information

Ecotoxicity effects The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|--|---|--------------------|------------------|----------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]- .omega.-hydroxy- | LC50 = 8.9 mg/L 96H LC50 = 4.0 mg/l 96H (Pimephales promelus) | EC50 = 26 mg/L 48h | - | - |

Persistence and Degradability Expected to be biodegradable
Persistence Persistence is unlikely.

| Component | Degradability |
|---|---------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- 9002-93-1 (100) | 60% >28 days |

Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Bioaccumulative Potential Bioaccumulation is unlikely

| Component | log Pow | Bioconcentration factor (BCF) |
|--|---------|-------------------------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]- .omega.-hydroxy- | 2.7 | No data available |

Mobility No information available.

Endocrine Disruptor Information

| Component | EU - Endocrine Disruptors Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|--|--|--|---|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]- .omega.-hydroxy- | Group III Chemical | - | - |

Persistent Organic Pollutant This product does not contain any known or suspected substance

Ozone Depletion Potential This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

| | |
|--|--|
| Waste from Residues/Unused Products | Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations. |
| Contaminated Packaging | Dispose of this container to hazardous or special waste collection point. |
| Other Information | Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations . Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment. |

Section 14 - Transport Information

IMDG/IMO

| | |
|--------------------------------|--|
| UN-No | UN3082 |
| Proper Shipping Name | Environmentally hazardous substances, liquid, n.o.s. |
| Technical Shipping Name | Triton X100 |

Hazard Class 9
Packing Group III

NZS 5433:2012

UN-No UN3082
Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s.
Technical Shipping Name Triton X100
Hazard Class 9
Packing Group III
IATA

UN-No UN3082
Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s.
Technical Shipping Name Triton X100
Hazard Class 9
Packing Group III

Environmental hazards Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

Special Precautions No special precautions required

Additional information None known

Section 15 - Regulatory Information

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

| Component | HSNO Approval Number |
|--|----------------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | HSR003221 |

International Inventories X = listed

| Component | NZIoC | AICS | EINECS | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | KECL |
|--|-------|------|--------|--------|------|-----|------|-------|------|-------|--------------|
| Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- | X | X | - | - | X | X | - | X | - | X | KE-3356 8 |

Prohibition or notification/licensing requirements Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

Section 16 - Other Information

This safety data sheet complies with the requirements of WorkSafe New Zealand Regulations

Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
IECSC - Chinese Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships

NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
CAS - Chemical Abstracts Service
ACGIH - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

NZS 5433:2012 - Transport of Dangerous Goods on Land
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
WEL - Workplace Exposure Limit
DNEL - Derived No Effect Level
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative
VOC (volatile organic compound)

OECD - Organisation for Economic Co-operation and Development
LC50 - Lethal Concentration 50%
ATE - Acute Toxicity Estimate
RPE - Respiratory Protective Equipment
NOEC - No Observed Effect Concentration
BCF - Bioconcentration factor
PBT - Persistent, Bioaccumulative, Toxic

Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

| | |
|-------------------------|-----------------|
| Creation Date | 28-Apr-2010 |
| Revision Date | 04-Jul-2020 |
| Revision Summary | Not applicable. |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet