GE Healthcare

Material Safety Data Sheet

Australia
English

1 . Identification of the material and supplier

Product name **Triton X-100, 500 ml**

Catalogue Number 17-1315-01

Company details

Manufacturer
GE Healthcare UK Ltd
Amersham Place
Little Chalfont
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England
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Supplier
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Building 4B, Parklands Estate
21 South Street
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Australia
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Emergency telephone number **000** and +61 2 9846 4000

Chemical product name Triton X-100

Synonyms x10; Polyethylene glycol alkylphenyl ether; Octyl Phenol Ethoxylate; Polyoxyethylene octyl phenyl ether; TRITON; Poly(oxy-1,2-ethanediyl), a-[4-(1,1,3,3-tetramethylbutyl)phenyl]-w-hydroxy-; Poly(oxy-1, 2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-; p-(1,1,3,3-Tetramethylbutyl) phenol ethoxylate; Polyethylene glycol 4-(tert-octyl)phenyl ether; Poly(oxy-1,2-ethanediyl), alpha-[4-(1,1,3, 3-tetramethylbutyl)phenyl]- omega -hydroxy-

ADG Environmentally hazardous substance, liquid, n.o.s. (Triton X-100)

Molecular formula $C_{34}H_{62}O_{11}$

Uses

Area of application Industrial applications.
Material uses Analytical chemistry. Research.
Product type Liquid.

2 . Hazards identification

Classification Xn; R22
Xi; R41

Risk phrases R22- Harmful if swallowed.
R41- Risk of serious damage to eyes.

Safety phrases S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/39- Wear suitable protective clothing and eye/face protection.

Statement of hazardous/dangerous nature

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

3 . Composition/information on ingredients

Mixture No.

Chemical name Triton X-100

Synonyms x10; Polyethylene glycol alkylphenyl ether; Octyl Phenol Ethoxylate; Polyoxyethylene octyl phenyl ether; TRITON; Poly(oxy-1,2-ethanediyl), a-[4-(1,1,3,3-tetramethylbutyl)phenyl]-w-hydroxy-; Poly(oxy-1, 2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-; p-(1,1,3,3-Tetramethylbutyl) phenol ethoxylate; Polyethylene glycol 4-(tert-octyl)phenyl ether; Poly(oxy-1,2-ethanediyl), alpha-[4-(1,1,3, 3-tetramethylbutyl)phenyl]- omega -hydroxy-

CAS number 9002-93-1

Chemical formula $C_{34}H_{62}O_{11}$

Ingredient name	CAS number	Concentration
Triton X-100	9002-93-1	100

Additional information

Not applicable.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First-aid measures

First-aid measures

Eye contact	Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5 . Fire-fighting measures

Extinguishing media

Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Special exposure hazards	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. In a fire or if heated, a pressure increase will occur and the container may burst.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide

6 . Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage Store between the following temperatures: 18 to 25°C (64.4 to 77°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Occupational exposure limits No exposure standard allocated.

Recommended monitoring procedures If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Hygiene measures Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Hands Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Respiratory Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state Liquid.

Colour Colourless.

Odour Odourless.

Boiling point 120°C (248°F)

Melting point -4°C (24.8°F)

Vapour pressure 0 kPa (0 mm Hg) [room temperature]

Density 1.082 g/cm³

Flash point Closed cup: >110°C (>230°F) [Product does not sustain combustion.]

Vapour density 21 [Air = 1]

Evaporation rate (butyl acetate = 1) 1 (butyl acetate = 1)

Solubility Easily soluble in the following materials: cold water and hot water.

Flame duration Not applicable.

10 . Stability and reactivity

Chemical stability The product is stable.

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.

11 . Toxicological information

Potential acute health effects

Inhalation No known significant effects or critical hazards.

Ingestion Harmful if swallowed.

Skin contact No known significant effects or critical hazards.

Eye contact Severely irritating to eyes. Risk of serious damage to eyes.

Acute toxicity

Conclusion/Summary Not available.

Potential chronic health effects

Chronic toxicity

Conclusion/Summary	Not available.

Irritation/Corrosion

Conclusion/Summary	Not available.

Sensitiser

Conclusion/Summary	Not available.

Carcinogenicity

Conclusion/Summary	Not available.

Mutagenicity

Conclusion/Summary	Not available.

Teratogenicity

Conclusion/Summary	Not available.

Reproductive toxicity

Conclusion/Summary	Not available.
Chronic effects	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation	No specific data.
Ingestion	No specific data.
Skin	No specific data.
Eyes	Adverse symptoms may include the following: pain or irritation watering redness
Target organs	May cause damage to the following organs: eyes, eye, lens or cornea.

12 . Ecological information

Ecotoxicity No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Triton X-100	Acute LC50 5.85 mg/l Fresh water		Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water		Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 6000 µg/l Fresh water		Fish - Pimephales promelas	96 hours

Conclusion/Summary Not available.

Persistence/degradability

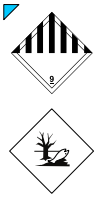
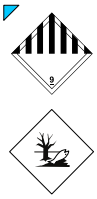
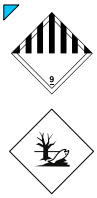
Conclusion/Summary	Not available.

Other adverse effects No known significant effects or critical hazards.

13 . Disposal considerations

Methods of disposal The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14 . Transport information

Regulation	UN number	Proper shipping name	Class	PG	Label	Additional information
ADG	UN3082	Environmentally hazardous substance, liquid, n.o. s. (Triton X-100)	9	III		-
ADR	UN3082	Environmentally hazardous substance, liquid, n.o. s. (Triton X-100)	9	III		**Tunnel code** (E)
IMDG	UN3082	Environmentally hazardous substance, liquid, n.o. s. (Triton X-100). Marine pollutant (Triton X-100)	9	III		
IATA	UN3082	Environmentally hazardous substance, liquid, n.o. s. (Triton X-100)	9	III		-

PG* : Packing group

15 . Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Ingredient name	Schedule
Not available.	

Australia inventory (AICS)	This material is listed or exempted.
EU Classification	Xn; R22 Xi; R41
HCS Classification	Irritating material Sensitising material Target organ effects

16 . Other information

History

Date of printing	14 April 2014	**Date of previous issue**	21 April 2009
Date of issue	14 April 2014	**Version**	5

Indicates information that has changed from previously issued version.

Enquiries regarding MSDS content should be directed to: our local sales office.

Notice to reader

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