SAFETY DATA SHEET

1. Identification

Triton X 100

Product identifier

Other means of identification

SDS Number 320171-09

Recommended use Non-ionic surfactant.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Level 7 Chemical

Address 255 Sturgis Rd
Conway, AR 72034
United States

Main Telephone Number (855) 927-1777

Website www.level7chemical.com

Emergency #: CHEMTREC 1-800-424-9300

Emergency #: CHEMTREC 1-703-741-5970 (International Number - Call collect)

2. Hazard(s) identification

Not classified.

Physical hazards

Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Harmful if swallowed. Causes skin irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves.

Response If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.

Storage Store away from incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in accordance with local,regional,national, and international regulations.

Disposal Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information 98.04% of the mixture consists of component(s) of unknown acute dermal toxicity. 98.04% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Octylphenol ethoxylate		9002-93-1	100

Residuals

Chemical name	Common name and synonyms	CAS number	%
1,4-dioxane		123-91-1	0.0007< 0.0011
Ethylene Oxide		75-21-8	0.001

Composition comments Occupational Exposure Limits for residuals are listed in Section 8.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and delayed Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for clean-up Absorb/clean with appropriate and compatible material. Stop flow of material if without risk. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Do not taste or swallow. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Residuals	Type	Value
Ethylene Oxide (CAS 75-21-8)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Residuals	Type	Value
1,4-dioxane (CAS 123-91-1)	PEL	360 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Residuals	Type	Value
Ethylene Oxide (CAS 75-21-8)	TWA	1 ppm
1,4-dioxane (CAS 123-91-1)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Residuals	Type	Value
Ethylene Oxide (CAS 75-21-8)	Ceiling	9 mg/m3
		5 ppm
	TWA	0.18 mg/m3
		0.1 ppm
1,4-dioxane (CAS 123-91-1)	Ceiling	3.6 mg/m3
		1 ppm

Biological limit values

ACGIH Biological Exposure Indices

Residuals	Value	Determinant	Specimen	Sampling Time
Ethylene Oxide (CAS 75-21-8)	5 µg/g	S-(2-hydroxyethyl) mercapturic acid (HEMA)	Creatinine in urine	*
	5000 pmol/g	N-(2-hydroxyethyl)-valine (HEV) hemoglobin adducts	Hemoglobin adducts	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

1,4-dioxane (CAS 123-91-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

1,4-dioxane (CAS 123-91-1) Skin designation applies.

US - Tennessee OELs: Skin designation

1,4-dioxane (CAS 123-91-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

1,4-dioxane (CAS 123-91-1) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

1,4-dioxane (CAS 123-91-1) Can be absorbed through the skin.

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.

Individual protection measures, such as personal protective equipment

General	Use personal protective equipment as required. It is recommended that users of this product perform a risk assessment to determine the appropriate PPE.
Eye/face protection	Avoid contact with eyes. Wear chemical goggles. Face shield is recommended. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin protection	
Hand protection	Wear appropriate chemical resistant, impervious gloves. Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Pale yellow.
Odor	Not available.
Odor threshold	Not available.
pH	6 - 7 (5% DI water)
Melting point/freezing point	< 45 °F (< 7.22 °C)
Initial boiling point and boiling range	215 - 225 °F (101.67 - 107.22 °C)
Flash point	> 212.0 °F (> 100.0 °C) Pensky-Martens Closed Cup
Evaporation rate	< 0.1 (NA=1)
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 5 mm Hg @ 68°F.
Vapor density	< 1
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Dispersible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

Other information

Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents. Aluminum. Inorganic acids and bases.
Hazardous decomposition products	Carbon monoxide. Organic compounds which may be toxic.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Toxicological data

Residuals	Species	Test Results
Ethylene Oxide (CAS 75-21-8)		
Acute		
Inhalation		
LC50	Dog	973 ppm, 4 Hours
Oral		
LD50	Rat	72 mg/kg
1,4-dioxane (CAS 123-91-1)		
Acute		
Dermal		
LD50	Rabbit	7600 mg/kg
Inhalation		
LC50	Rat	46 mg/l, 2 Hours
Oral		
LD50	Rabbit	2000 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity

1,4-dioxane (CAS 123-91-1)	2B Possibly carcinogenic to humans.
Ethylene Oxide (CAS 75-21-8)	1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Ethylene Oxide (CAS 75-21-8)	Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

1,4-dioxane (CAS 123-91-1)	Reasonably Anticipated to be a Human Carcinogen.
Ethylene Oxide (CAS 75-21-8)	Known To Be Human Carcinogen.

Reproductive toxicity Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - single exposure Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure Due to partial or complete lack of data the classification is not possible.

Aspiration hazard Due to partial or complete lack of data the classification is not possible.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Product		Species	Test Results
Triton X 100			
Aquatic			
Fish	LC50	Fish	61.4098 mg/l, 96 hours estimated

Components		Species	Test Results
Octylphenol ethoxylate (CAS 9002-93-1)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	2.8 - 3.2 mg/l, 96 hours

Residuals		Species	Test Results
Ethylene Oxide (CAS 75-21-8)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	73 - 96 mg/l, 96 hours
1,4-dioxane (CAS 123-91-1)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	6700 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Octylphenol ethoxylate), MARINE POLLUTANT

Transport hazard class(es)

Class 9

Subsidiary risk -

Label(s) 9

Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	8, 146, 335, IB3, T4, TP1, TP29
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241

Not regulated by DOT in containers 119 gallons or less.

IATA

UN number	UN3082
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Octylphenol ethoxylate)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Octylphenol ethoxylate), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT; IATA; IMDG

Marine pollutant

General information DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated “active”.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,4-dioxane (CAS 123-91-1)	Listed.
Ethylene Oxide (CAS 75-21-8)	Listed.

SARA 304 Emergency release notification

ETHYLENE OXIDE (CAS 75-21-8)	10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Ethylene Oxide (CAS 75-21-8)	Cancer Reproductive toxicity Mutagenicity Central nervous system Skin sensitization Skin irritation Eye irritation respiratory tract irritation Acute toxicity Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Ethylene Oxide	75-21-8	10	1000		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Acute toxicity (any route of exposure)
Skin corrosion or irritation

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Glycol Ethers as Defined by EPA (65 FR 47342, Aug 2, 2000)	Mixture	<2
1,4-dioxane	123-91-1	0.0007< 0.0011
Ethylene Oxide	75-21-8	0.001

US state regulations

California Proposition 65

WARNING: This product can expose you to chemicals including Ethylene Oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-dioxane (CAS 123-91-1)	Listed: January 1, 1988
Ethylene Oxide (CAS 75-21-8)	Listed: July 1, 1987

California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene Oxide (CAS 75-21-8)	Listed: August 7, 2009

California Proposition 65 - CRT: Listed date/Female reproductive toxin

Ethylene Oxide (CAS 75-21-8)	Listed: February 27, 1987

California Proposition 65 - CRT: Listed date/Male reproductive toxin

Ethylene Oxide (CAS 75-21-8)	Listed: August 7, 2009

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,4-dioxane (CAS 123-91-1)
Ethylene Oxide (CAS 75-21-8)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-30-2014

Revision date 11-23-2020

Version # 13

HMIS® ratings
Health: 2
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

Disclaimer
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Revision information
This document has undergone significant changes and should be reviewed in its entirety.