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**** MATERIAL SAFETY DATA SHEET ****

Triton x-100
95513

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Triton x-100
Catalog Numbers:
AC215680000, AC215680010, AC215680050, AC215682500

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

Company Identification (Europe): Acros Organics BVBA
Janssen Pharmaceuticaalaan 3a
2440 Geel, Belgium
Acros Organics
Company Identification (USA): One Reagent Lane
Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01
For information in Europe, call: 0032(0) 14575211
For emergencies in the US, call CHEMTREC: 800-424-9300
For emergencies in Europe, call: 0032(0) 14575299

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
9002-93-1	Triton X-100	ca.100	unlisted

Hazard Symbols: XN
Risk Phrases: 22 41

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid.
Warning! May cause allergic skin reaction. The toxicological properties of this material have not been fully investigated. May be harmful if swallowed. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.
Target Organs: Eyes.

Potential Health Effects

- Eye:** Causes severe eye irritation. Causes redness and pain. Risk of serious damage to eyes.
- Skin:** May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
- Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.
- Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.
- Chronic:** Repeated exposure may cause sensitization dermatitis.

**** SECTION 4 - FIRST AID MEASURES ****

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin:** Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
- Ingestion:** Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid. Wash mouth out with water.
- Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
- Notes to Physician:** Treat symptomatically and
- Antidote:** None reported.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect

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in low or confined areas. Runoff from fire control or dilution water may cause pollution.
Extinguishing Media:
Water or foam may cause frothing. Use water spray, dry chemical, carbon dioxide, or chemical foam.
Autoignition Temperature: Not available.
Flash Point: 274 deg C (525.20 deg F)
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation.

Storage:
Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Triton X-100	none listed	none listed	none listed

OSHA Vacated PELs:
Triton X-100:
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

- Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin:** Wear appropriate protective gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Liquid
Color: clear, colorless
Odor: Not available.
pH: Not available.
Vapor Pressure: < 1 mm Hg @ 20
22.31
Vapor Density: Not available.
Evaporation Rate: 240 cP 25 deg C
Viscosity: 270 deg C @ 760.00mm Hg
Boiling Point: 6 deg C
Freezing/Melting Point:
Decomposition Temperature:
Solubility in water: insoluble in kerosene, mineral spirits.
Specific Gravity/Density: 1.0590g/cm3
Molecular Formula:
Molecular Weight: 646.85

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**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Light, exposure to air, exposure to moist air or water.
Incompatibilities with Other Materials:
Strong oxidizing agents - strong reducing agents - high temperatures.
Hazardous Decomposition Products:
Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 9002-93-1: MD0907700 YM0616666 YM0683332
LD50/LC50:
CAS# 9002-93-1: Draize test, rabbit, eye: 10 uL/24H Moderate; Draize test, rabbit, skin: 500 uL/24H Mild; Oral, rat: LD50 = 1800 mg/kg.
Carcinogenicity:
Triton X-100 -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No information found.
Teratogenicity:
No information found.
Reproductive Effects:
No information found.
Neurotoxicity:
No information found.
Mutagenicity:
skn-hmn:2 mg/3D eye-rbt:1 mg Standard Draize test Mut. DNA inhibition hmn HeLa cells:21 mg/L Mut. hmn HeLa cells:14 mg/L
Other Studies:
COD:1.99 g oxygen/g thOD:2.13 g oxygen/g BOD-5:0 g oxygen/g

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
Fish-toxicity: Bluegill TL(96H): Dynamic Bioassay: >10 mg/l Static Bioassay: 12 mg/l

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.
US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
No information available
Canadian TDG
No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
CAS# 9002-93-1 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Code
CAS # 9002-93-1: acute.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.

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None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
Triton X-100 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level:
None of the chemicals in this product are listed.
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN

Risk Phrases:
R 22 Harmful if swallowed.
R 41 Risk of serious damage to eyes.

Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 39 Wear eye/face protection.

WGK (Water Danger/Protection)
CAS# 9002-93-1: 1
United Kingdom Occupational Exposure Limits
United Kingdom Maximum Exposure Limits

Canada
CAS# 9002-93-1 is listed on Canada's DSL List.
This product has a WHMIS classification of D2B.
CAS# 9002-93-1 is listed on Canada's Ingredient Disclosure List.
Exposure Limits

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 2/04/1999 Revision #2 Date: 5/06/2002

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 way shall the company 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 the company has been advised of the possibility of such damages.