

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 05/21/2020

Version 2.3

SECTION 1. Identification**Product identifier**

Product number	108603
Product name	Triton® X-100 for analysis
CAS-No.	9036-19-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Reagent for analysis
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Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 400 Summit Drive Burlington Massachusetts 01803 United States of America General Inquiries: +1 800-645-5476 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification**GHS Classification**

Acute toxicity, Category 4, Oral, H302
Skin irritation, Category 2, H315
Serious eye damage, Category 1, H318

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

GHS-Labeling

Hazard pictograms



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Signal Word

Danger

Hazard Statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary Statements

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ eye protection/ face protection.

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

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature	Mixture of organic compounds	
Formula	$C_8H_{17}C_6H_4(OCH_2CH_2)_nOH$ (Hill)	$C_{14}H_{21}(C_2H_4O)_nOH$

Hazardous ingredients

Chemical name (Concentration)

CAS-No.

Octylphenol polyethoxyethanol ($\geq 90\%$ - $\leq 100\%$)

9036-19-5

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

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Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

Ingestion

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Irritation and corrosion
Vomiting, Dermatitis
Drying-out effect resulting in rough and chapped skin.
Risk of corneal clouding.
Risk of serious damage to eyes.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

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.

Special hazards arising from the substance or mixture

Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapors possible in the event of fire.

Advice for firefighters

Special protective equipment for fire-fighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed.

Store at +15°C to +25°C.

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

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

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Tightly fitting safety goggles

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Hand protection

full contact:

Glove material: butyl-rubber
Glove thickness: 0.7 mm
Break through time: > 480 min

splash contact:

Glove material: butyl-rubber
Glove thickness: 0.7 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 898 Butoject® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. 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 (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment:

protective clothing

Respiratory protection

required when vapors/aerosols are generated.

Recommended Filter type: Filter A-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer.

These measures have to be properly documented.

SECTION 9. Physical and chemical properties

Physical state	liquid
Color	colorless
Odor	weak
Odor Threshold	No information available.
pH	5.0 - 8.0 at 10 g/l 68 °F (20 °C)
Solidification point	43 °F (6 °C)

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Boiling point/boiling range	> 392 °F (> 200 °C) at 1,013 hPa
Flash point	484 °F (251 °C) at 1,013 hPa Method: ASTM D 93
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	< 0.01 hPa at 68 °F (20 °C)
Relative vapor density	No information available.
Density	1.07 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	log Pow: 2.7 (20 °C) (calculated) (External MSDS) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Cloud point	145 - 156 °F (63 - 69 °C)

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SECTION 10. Stability and 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.

Chemical stability

Upon decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.

Possibility of hazardous reactions

Violent reactions possible with:
Strong oxidizing agents, Strong acids

Conditions to avoid

Strong heating.

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact

Acute oral toxicity

LD50 Rat: 1,900 - 5,000 mg/kg (External MSDS)

Symptoms: Vomiting, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis.

Acute inhalation toxicity

Symptoms: Possible damages:, mucosal irritations

Acute dermal toxicity

LD50 Rabbit: > 3,000 mg/kg
(External MSDS)

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Skin irritation

Rabbit

Result: irritating

OECD Test Guideline 404

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

Causes skin irritation.

Drying-out effect resulting in rough and chapped skin. Dermatitis

Eye irritation

Risk of corneal clouding.

Causes serious eye damage.

Sensitization

Sensitization test: human

Result: negative

(External MSDS)

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After absorption:

We have no description of any toxic symptoms.

Other dangerous properties can not be excluded.

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Handle in accordance with good industrial hygiene and safety practice.

Components

Octylphenol polyethoxyethanol

Acute oral toxicity

LD50 Rat: 1,900 - 5,000 mg/kg (External MSDS)

Acute dermal toxicity

LD50 Rabbit: > 3,000 mg/kg (External MSDS)

Skin irritation

Rabbit

Result: irritating

OECD Test Guideline 404

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

Sensitization

Sensitization test: human

Result: negative

(External MSDS)

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

semi-static test LC50 *Leuciscus idus* (Golden orfe): 0.26 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203 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 (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

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

tetramethylbutyl)phenol

Toxicity to fish (Chronic toxicity)

flow-through test *Danio rerio* (zebra fish): 0.012 mg/l

Analytical monitoring: yes

OECD Test Guideline 210 The value is given in analogy to the following substances:

4-(1,1,3,3-tetramethylbutyl)phenol

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
semi-static test NOEC Daphnia magna (Water flea): 0.03 mg/l; 21 d

Analytical monitoring: yes

OECD Test Guideline 202 The value is given in analogy to the following substances:
4-(1,1,3,3-tetramethylbutyl)phenol

Persistence and degradability

Biodegradability

22 %; 28 d; aerobic

OECD Test Guideline 301C

Not readily biodegradable.

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: 2.7 (20 °C)

(calculated)

(External MSDS) Bioaccumulation is not expected.

Mobility in soil

No information available.

Additional ecological information

Causes endocrine disruption.

Discharge into the environment must be avoided.

Components

Octylphenol polyethoxyethanol

Toxicity to fish

semi-static test LC50 Leuciscus idus (Golden orfe): 0.26 mg/l; 96 h

Analytical monitoring: yes

OECD Test Guideline 203 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 (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 (ECHA) The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl)phenol

Toxicity to fish (Chronic toxicity)

flow-through test Danio rerio (zebra fish): 0.012 mg/l

Analytical monitoring: yes

OECD Test Guideline 210 The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl)phenol

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
semi-static test NOEC Daphnia magna (Water flea): 0.03 mg/l; 21 d

Analytical monitoring: yes

OECD Test Guideline 202 The value is given in analogy to the following substances: 4-(1,1,3,3-tetramethylbutyl)phenol

Biodegradability
22 %; 28 d; aerobic
OECD Test Guideline 301C

Not readily biodegradable.

M-Factor
10

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number	UN 3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (OCTYLPHENOXYPOLYETHOXYETHANOL)
Class	9
Packing group	III
Environmentally hazardous	--

Air transport (IATA)

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UN number	UN 3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (OCTYLPHENOXYPOLYETHOXYETHANOL)
Class	9
Packing group	III
Environmentally hazardous	--
Special precautions for user	no
Sea transport (IMDG)	
UN number	UN 3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (OCTYLPHENOXYPOLYETHOXYETHANOL)
Class	9
Packing group	III
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-A S-F

SECTION 15. Regulatory information

United States of America

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Danger

Hazard Statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

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H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

P273 Avoid release to the environment.

P280 Wear eye protection.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

P313 Get medical advice/ attention.

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.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 05/21/2020

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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