# Triton X-100®
## Safety Data Sheet
### according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Date of issue:** 06/16/2014  
**Revision date:** 05/15/2018  
**Supersedes:** 06/16/2014  
**Version:** 1.1

## SECTION 1: Identification
### 1.1. Identification
- **Product form:** Substance
- **Substance name:** Triton X-100®
- **CAS-No.:** 9036-19-5
- **Product code:** LC26280
- **Formula:** \((\text{C}_2\text{H}_4\text{O})_n\cdot\text{C}_{14}\text{H}_{22}\text{O}\)
- **Synonyms:** 2-methyl-2-propenoic acid, polymer with 2-propenoic acid and N-octy-2-propenamide / alpha(1,1,3,3-tetramethylbutyl)phenyl/omega-hydroxypoly(oxy-1,2-ethanediyl) / ethoxylated octylphenol / octyloxyxypoly(ethoxyethanol) / poly(ethylene oxide)octylphenyl ether / Triton X 100

### 1.2. Recommended use and restrictions on use
- **Use of the substance/mixture:** Emulsifier  
- **Detergent according to Regulation (EC) No 648/2004**

### 1.3. Supplier
- **LabChem Inc**  
  Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
  Zelienople, PA 16063 - USA  
  T 412-826-5230 - F 724-473-0647  
  info@labchem.com - www.labchem.com

### 1.4. Emergency telephone number
- **Emergency number:** CHEMTREC: 1-800-424-9300 or +1-703-741-5970

## SECTION 2: Hazard(s) identification
### 2.1. Classification of the substance or mixture

| GHS-US classification | H315 | Causes skin irritation  
|-----------------------|------|------------------------  
| Skin corrosion/irritation Category 2 |  
| Serious eye damage/eye irritation Category 2A | H319 | Causes serious eye irritation  

Full text of H statements: see section 16

### 2.2. GHS Label elements, including precautionary statements

#### GHS-US labeling
- **Hazard pictograms (GHS-US):**

![GHS07]

- **Signal word (GHS-US):** Warning
- **Hazard statements (GHS-US):**  
  - H315 - Causes skin irritation  
  - H319 - Causes serious eye irritation
- **Precautionary statements (GHS-US):**  
  - P264 - Wash exposed skin thoroughly after handling.  
  - P280 - Wear protective gloves, eye protection.  
  - 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  
  - P332+P313 - If skin irritation occurs: Get medical advice/attention.  
  - P337+P313 - If eye irritation persists: Get medical advice/attention.  
  - P362 - Take off contaminated clothing and wash before reuse.

### 2.3. Other hazards which do not result in classification
- **Other hazards not contributing to the classification:** None under normal conditions.

### 2.4. Unknown acute toxicity (GHS US)
- **Not applicable**
SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100®</td>
<td>(CAS-No.) 9036-19-5</td>
<td>100</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td>(Main constituent)</td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.


4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation: ON CONTINUOUS EXPOSURE/CONTACT: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/effects after skin contact: Tingling/irritation of the skin.

Symptoms/effects after eye contact: Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Inflammation/damage of the eye tissue.

Symptoms/effects after ingestion: Gastrointestinal complaints.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


Unsuitable extinguishing media: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2. Specific hazards arising from the chemical

Fire hazard: DIRECT FIRE HAZARD. Non-flammable. INDIRECT FIRE HAZARD. Heating increases the fire hazard.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions: Cool tanks/drums with water spray/remove them into safety.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Gloves. Face-shield. Protective clothing.
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Emergency procedures: Mark the danger area. No naked flames. Wash contaminated clothes.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.
Methods for cleaning up: Take up liquid spill into absorbent material sand/earth. Scoop absorbed substance into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Precautions for safe handling: Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use.
Hygiene measures: Observe normal hygiene standards. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container closed when not in use.
Incompatible materials: Sources of ignition. Direct sunlight.
Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.
Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. reducing agents. (strong) bases. water/moisture.
Storage area: Store in a cool area. Store in a dry area. Store in a dark area. Ventilation at floor level. May be stored under argon. Meet the legal requirements.
Special rules on packaging: SPECIAL REQUIREMENTS: closing. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials: SUITABLE MATERIAL: steel with plastic inner lining.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
No additional information available

8.2. Appropriate engineering controls
Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Safety glasses. Gloves.

Materials for protective clothing:
GIVE GOOD RESISTANCE: rubber, plastics

Hand protection:
Gloves

Eye protection:
Face shield

Skin and body protection:
Protective clothing

Respiratory protection:
Mist formation: aerosol mask

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state (state of matter)</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Light yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Almost odourless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 7.5 (1 %)</td>
</tr>
<tr>
<td>Melting point</td>
<td>-5 - 5 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 177 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 110 °C</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 2</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.05</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1050 kg/m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td></td>
<td>Water: complete</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>0.39 Pa.s (20 °C)</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

VOC content: 100 %

Other properties:

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

Not established.
10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact
Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>Triton X-100® (9036-19-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>ATE US (oral)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes skin irritation.
   pH: 6 - 7.5 (1 %)

Serious eye damage/irritation : Causes serious eye irritation.
   pH: 6 - 7.5 (1 %)

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified
Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms
   : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : ON CONTINUOUS EXPOSURE/CONTACT: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/effects after skin contact : Tingling/irritation of the skin.
Symptoms/effects after eye contact : Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Inflammation/damage of the eye tissue.
Symptoms/effects after ingestion : Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water : Mild water pollutant (surface water). Insufficient data available on ecotoxicity.

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Triton X-100® (9036-19-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available
12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.


Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Triton X-100® (9036-19-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

<table>
<thead>
<tr>
<th>EPA TSCA Regulatory Flag</th>
<th>XU - XU - indicates a substance exempt from reporting under Chemical Data Reporting Rule (formerly the Inventory Update Reporting Rule), i.e., Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 711).</th>
</tr>
</thead>
</table>

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date : 05/15/2018
Other information : None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
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</tbody>
</table>
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NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating
Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B
B - Safety glasses, Gloves

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