SAFETY DATA SHEET
Polyethylene glycol tert-octylphenyl ether

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name
Polyethylene glycol tert-octylphenyl ether

Product number
FP14128

Synonyms; trade names
Triton® X-100, 4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol, t-Octylphenoxypolyethoxyethanol

CAS number
9002-93-1

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

Identified uses
Laboratory reagent. Manufacture of substances. Research and development.

1.3. Details of the supplier of the safety data sheet

Supplier
Carbosynth Ltd
8&9 Old Station Business Park
Compton
Berkshire
RG20 6NE
UK
+44 1635 578444
+44 1635 579444
info@carbosynth.com

1.4. Emergency telephone number

Emergency telephone
+44 7887 998634

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards
Not Classified

Health hazards
Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318

Environmental hazards
Aquatic Chronic 1 - H410

2.2. Label elements

Pictogram

Signal word
Danger
Polyethylene glycol tert-octylphenyl ether

Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of 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.
P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances
Product name Polyethylene glycol tert-octylphenyl ether
CAS number 9002-93-1
Chemical formula C₁₄H₂₂O(C₂H₄O)n

SECTION 4: First aid measures

4.1. Description of first aid measures
General information Get medical advice/attention if you feel unwell.
Inhalation Remove person to fresh air and keep comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Get medical attention if symptoms are severe or persist.
Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.
Skin contact Remove contaminated clothing. Rinse with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist.
Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

4.2. Most important symptoms and effects, both acute and delayed
General information See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed
Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Specific hazards None known.
Polyethylene glycol tert-octylphenyl ether

<table>
<thead>
<tr>
<th>Hazardous combustion products</th>
<th>Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Oxides of carbon.</th>
</tr>
</thead>
</table>

**5.3. Advice for firefighters**

| Special protective equipment for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Use protective equipment appropriate for surrounding materials. |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

| Personal precautions | Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapours. Provide adequate ventilation. Keep unnecessary and unprotected personnel away from the spillage. |

#### 6.2. Environmental precautions

| Environmental precautions | Avoid discharge into drains or watercourses or onto the ground. |

#### 6.3. Methods and material for containment and cleaning up

| Methods for cleaning up | Wear protective clothing as described in Section 8 of this safety data sheet. Absorb spillage with sand or other inert absorbent. Clear up spills immediately and dispose of waste safely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Provide adequate ventilation. For waste disposal, see Section 13. |

#### 6.4. Reference to other sections

| Reference to other sections | For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13. |

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

| Usage precautions | Wear protective clothing as described in Section 8 of this safety data sheet. Wash hands thoroughly after handling. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapours. |

#### 7.2. Conditions for safe storage, including any incompatibilities

| Storage precautions | Keep container tightly closed. Store contents under inert gas. Store at temperatures between 2°C and 8°C. |

#### 7.3. Specific end use(s)

| Specific end use(s) | The identified uses for this product are detailed in Section 1.2. |

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

| Occupational exposure limits | No exposure limits known for ingredient(s). |

#### 8.2. Exposure controls

| Appropriate engineering controls | Provide adequate ventilation. |
Polyethylene glycol tert-octylphenyl ether

Eye/face protection
Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance
Clear liquid.

Colour
Colourless to pale yellow.

Odour
No data available.

Odour threshold
No data available.

pH
No data available.

Melting point
6°C

Initial boiling point and range
>200°C

Flash point
251°C Closed cup.

Evaporation rate
No data available.

Flammability (solid, gas)
No data available.

Upper/lower flammability or explosive limits
No data available.

Vapour pressure
<1.33 hPa @ 20°C

Vapour density
No data available.

Relative density
1.0700 g/cm³

Solubility(ies)
Soluble in water.

Partition coefficient
No data available.

Auto-ignition temperature
No data available.

Decomposition Temperature
No data available.

Viscosity
No data available.

Explosive properties
No data available.

Oxidising properties
No data available.
Polyethylene glycol tert-octylphenyl ether

9.2. Other information

Molecular weight: Polymer

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity: No data available.

10.2. Chemical stability

Stability: Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions: No data available.

10.4. Conditions to avoid

Conditions to avoid: No data available.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products: Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg): 1,800.0

Species: Rat

Notes (oral LD₅₀): Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg): 1,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg): 8,000.0

Species: Rabbit

Notes (dermal LD₅₀): Based on available data the classification criteria are not met.

ATE dermal (mg/kg): 8,000.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀): Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data: Irritating.

Serious eye damage/irritation

Serious eye damage/irritation: Eye Dam. 1 - H318 Causes serious eye damage.

Respiratory sensitisation

Based on available data the classification criteria are not met.
Polyethylene glycol tert-octylphenyl ether

Skin sensitisation
Based on available data the classification criteria are not met.

Germ cell mutagenicity
Based on available data the classification criteria are not met.

Carcinogenicity
Based on available data the classification criteria are not met.

IARC carcinogenicity
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure
Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard
Based on available data the classification criteria are not met.

General information
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation
No specific symptoms known.

Ingestion
May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

Skin contact
Redness. Irritating to skin.

Eye contact
Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

Route of exposure
Ingestion Inhalation Skin and/or eye contact

Target organs
No specific target organs known.

RTECS #
MD0907700

SECTION 12: Ecological Information

Ecotoxicity
Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Acute aquatic toxicity
LC₅₀, 96 hour: 4 - 8.9 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates
LC₅₀, 48 hour: 18 - 26 mg/l, Daphnia magna

Chronic aquatic toxicity
NOEC
0.01 < NOEC ≤ 0.1

Degradability
Non-rapidly degradable
Polyethylene glycol tert-octylphenyl ether

M factor (Chronic) 1

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.
Partition coefficient No data available.

12.4. Mobility in soil

Mobility No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3082
UN No. (IMDG) 3082
UN No. (ICAO) 3082
UN No. (ADN) 3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol tert-octylphenyl ether)
Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol tert-octylphenyl ether)
Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol tert-octylphenyl ether)
Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene glycol tert-octylphenyl ether)

14.3. Transport hazard class(es)

ADR/RID class 9
ADR/RID classification code M6
ADR/RID label 9
IMDG class 9
Polyethylene glycol tert-octylphenyl ether

ICAO class/division 9
ADN class 9

Transport labels

14.4. Packing group
ADR/RID packing group III
IMDG packing group III
ADN packing group III
ICAO packing group III

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user
EmS F-A, S-F
ADR transport category 3
Emergency Action Code •3Z
Hazard Identification Number (ADR/RID) 90

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EH40/2005 Workplace exposure limits.


15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories
US - TSCA
Present.

Revision date: 28/11/2017
## Polyethylene glycol tert-octylphenyl ether

### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Abbreviations and acronyms used in the safety data sheet</th>
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<tbody>
<tr>
<td>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</td>
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<tr>
<td>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</td>
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<tr>
<td>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</td>
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<tr>
<td>IATA: International Air Transport Association.</td>
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<tr>
<td>IMDG: International Maritime Dangerous Goods.</td>
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<tr>
<td>CAS: Chemical Abstracts Service.</td>
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<td>ATE: Acute Toxicity Estimate.</td>
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<tr>
<td>LC₅₀: Lethal Concentration to 50 % of a test population.</td>
</tr>
<tr>
<td>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</td>
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<tr>
<td>EC₅₀: 50% of maximal Effective Concentration.</td>
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<tr>
<td>PBT: Persistent, Bioaccumulative and Toxic substance.</td>
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<tr>
<td>vPvB: Very Persistent and Very Bioaccumulative.</td>
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### Training advice

Only trained personnel should use this material.

### Revision date

28/11/2017

### Revision

1

### SDS number

144929

### Hazard statements in full

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.