

SAFETY DATA SHEET

1. Identification

Product identifier: SURFYNOL® CT-171

Chemical name: Surfactant blend

Other means of identification

Recommended use: Industrial use

Recommended restrictions: None known.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
Nutrition & Care
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Richmond, VA 23234
USA

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E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)
Emergency : 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Classification according to GHS

Health Hazards

Serious Eye Damage/Eye Irritation Category 1

Skin sensitizer Category 1

Environmental Hazards

Chronic hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Causes serious eye damage.
 May cause an allergic skin reaction.
 Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

Response: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Disposal: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards: None known.

3. Composition/information on ingredients

Chemical name:
 Surfactant blend

Mixtures

| Chemical Identity | Common name and synonyms | CAS number | Content in percent (%)* |
|---|--------------------------|------------|-------------------------|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt | No data available. | 9051-57-4 | 10 - <30% |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω -hydroxy-, branched | No data available. | 68412-54-4 | <10% |
| 2,4,7,9-Tetramethyldec-5-yne-4,7-diol | No data available. | 126-86-3 | <5% |

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

| | |
|--|---|
| General information: | Immediately remove contaminated clothing. |
| Inhalation: | fresh air supply, consult a doctor if feeling unwell. |
| Skin Contact: | In case of contact with skin wash off with soap and water. In case of discomfort: Supply with medical care. |
| Eye contact: | In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice |
| Ingestion: | Thoroughly clean the mouth with water In case of discomfort: Supply with medical care. |
| Personal Protection for First-aid Responders: | No data available. |

Most important symptoms and effects, both acute and delayed

| | |
|------------------|---------------------------------|
| Symptoms: | Risk of serious damage to eyes. |
| Hazards: | No data available. |

Indication of immediate medical attention and special treatment needed

| | |
|-------------------|------------------------|
| Treatment: | Treat symptomatically. |
|-------------------|------------------------|

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray.

Unsuitable extinguishing media: High volume water jet.

Special hazards arising from the substance or mixture: In the event of fire the following can be released: - carbon dioxide, carbon monoxide Under certain conditions of combustion traces of other toxic substances cannot be excluded

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures: No specific precautions.

Special protective equipment for fire-fighters: Do not inhale explosion and/or combustion gases. Use self-contained breathing apparatus and wear protective suit

6. Accidental release measures

| | |
|---|--|
| Personal precautions, protective equipment and emergency procedures: | Use personal protective equipment. |
| Accidental release measures: | No data available. |
| Methods and material for containment and cleaning up: | Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with the regulations. |
| Environmental Precautions: | Do not allow to enter drains or waterways Prevent product from getting into subsoil/soil. |

7. Handling and storage

Handling

| | |
|---|--|
| Technical measures (e.g. Local and general ventilation): | No data available. |
| Safe handling advice: | Provide good ventilation of working area (local exhaust ventilation if necessary). Avoid contact with skin and eyes. Do not inhale gases/vapours/aerosols. |
| Contact avoidance measures: | No data available. |

Storage

| | |
|----------------------------------|--|
| Safe storage conditions: | Keep container tightly closed in a cool, well-ventilated place. Protect from frost. Do not store together with oxidizing agents. |
| Safe packaging materials: | No data available. |

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

Biological Limit Values

Observe national threshold limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

| | |
|-----------------------------|--------------------------------|
| General information: | No data available. |
| Eye/face protection: | Tightly fitting safety goggles |

Skin Protection

| | |
|--------------------------------|--|
| Hand Protection: | Additional Information: gloves made of nitril (NBR) |
| Other: | protective clothing |
| Respiratory Protection: | in case of formation of vapours/aerosols: Short term: filter apparatus, combination filter A-P2 |
| Hygiene measures: | Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Remove soiled or soaked clothing immediately. |

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

| | |
|------------------------|----------------|
| Physical state: | liquid |
| Form: | liquid |
| Color: | Pale yellow |
| Odor: | Characteristic |
| Odor Threshold: | not measured |
| Freezing point: | not measured |
| Boiling Point: | 212 °F/100 °C |
| Flammability: | not measured |

Upper/lower limit on flammability or explosive limits

| | |
|-----------------------------------|-------------------|
| Explosive limit - upper: | not measured |
| Explosive limit - lower: | not measured |
| Flash Point: | > 212 °F/> 100 °C |
| Self Ignition Temperature: | not measured |
| Decomposition Temperature: | not measured |
| pH: | not measured |

Viscosity

| | |
|-----------------------------|--------------------|
| Dynamic viscosity: | not measured |
| Kinematic viscosity: | not measured |
| Flow Time: | No data available. |

Solubility(ies)

| | |
|---|--------------|
| Solubility in Water: | not measured |
| Solubility (other): | not measured |
| Partition coefficient (n-octanol/water): | not measured |

| | |
|--------------------------------|--------------------------------------|
| Vapor pressure: | 24,5 hPa (70 °F/21 °C) |
| Relative density: | not measured |
| Density: | 1,06 g/cm ³ (70 °F/21 °C) |
| Bulk density: | No data available. |
| Relative vapor density: | not measured |

Other information

| | |
|--------------------------------------|-------------------------|
| Explosive properties: | not measured |
| Oxidizing properties: | not oxidizing |
| Minimum ignition temperature: | not measured |
| Metal Corrosion: | Not corrosive to metals |
| Evaporation Rate: | not measured |

10. Stability and reactivity

| | |
|--|---|
| Reactivity: | see section "Possibility of hazardous reactions". |
| Chemical Stability: | The product is stable under normal conditions. |
| Possibility of hazardous reactions: | No hazardous reactions with proper storage and handling |
| Conditions to avoid: | Freezing. |
| Incompatible Materials: | Oxidizing agents. |
| Hazardous Decomposition Products: | None with proper storage and handling. |

11. Toxicological information

Information on toxicological effects

Information on likely routes of exposure

| | |
|----------------------|---|
| Inhalation: | Information on effects are given below. |
| Skin Contact: | Information on effects are given below. |
| Eye contact: | Information on effects are given below. |
| Ingestion: | Information on effects are given below. |

Acute toxicity (list all possible routes of exposure)

Oral

| | |
|--|-------------------------------|
| Product: | LD 50 (ATEmix): > 5.000 mg/kg |
| Components: | |
| Poly(oxy-1,2-ethanediyl), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt | LD 50 (Rat): 8.000 mg/kg |
| Poly(oxy-1,2-ethanediyl), a-(nonylphenyl)-ω-hydroxy-, branched | LD 50 (Rat): 3.000 mg/kg |
| 2,4,7,9-Tetramethyldec-5-yne-4,7-diol | LD 50 (Rat): > 5.000 mg/kg |

Dermal

Product: LD 50 (ATEmix): > 5.000 mg/kg

Components:

Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt

No data available.

Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched

LD 50 (Rabbit): 2.830 mg/kg

2,4,7,9-Tetramethyldec-5-yne-4,7-diol

LD 50 (Rabbit): > 5.000 mg/kg

Inhalation

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt

Vapour, No data available. Dusts, mists and fumes, No data available.

Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched

Vapour, No data available. Dusts, mists and fumes, No data available.

2,4,7,9-Tetramethyldec-5-yne-4,7-diol

LC 50 (Rat, 1 h): > 20 mg/l Dusts, mists and fumes LC 50 (Rat, 4 h): > 5 mg/l Dusts, mists and fumes Vapour, No data available.

Repeated dose toxicity

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt

No data available.

Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched

No data available.

2,4,7,9-Tetramethyldec-5-yne-4,7-diol

NOAEL - No Observable Adverse Effect Level (Rat, Oral, daily): 500 mg/kg

Skin Corrosion/Irritation

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt

No data available.

Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched

No data available.

2,4,7,9-Tetramethyldec-5-yne-4,7-diol

OECD 404 (Rabbit): Not irritating , 4 h

Serious Eye Damage/Eye Irritation

| | |
|---|---|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | (Rabbit): Irritating. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω- hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | US-EPA-method (Rabbit): Risk of serious damage to eyes. |

Respiratory or Skin Sensitization

| | |
|---|--|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω- hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | Local Lymph Node Assay (LLNA), OECD 429 (Mouse): Skin sensitizer |

Carcinogenicity

| | |
|---|--------------------|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω- hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | No data available. |

Germ Cell Mutagenicity

No data available.

In vitro

| | |
|--------------------|--------------------|
| Product: | No data available. |
| Components: | |

| | |
|---|--|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω - hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec- 5-yne-4,7-diol | Ames test (OECD 471): negative Own study Chromosomal aberration (OECD 473): negative Own study gene mutation test (OECD 476): negative Own study |

In vivo

Product: No data available.

Components:

| | |
|---|--------------------|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω - hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec- 5-yne-4,7-diol | No data available. |

Reproductive toxicity

Product: No data available.

Components:

| | |
|---|--------------------|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω - hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | Oral |

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Components:

| | |
|---|--------------------|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω - hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | No data available. |

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Components:

| | |
|---|--------------------|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω- hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | No data available. |

Aspiration Hazard

Product: Not classified

Components:

| | |
|---|----------------|
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega- (Nonylphenoxy)- Branched, Ammonium Salt | Not classified |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω- hydroxy-, branched | Not classified |
| 2,4,7,9-Tetramethyldec-5- yne-4,7-diol | Not applicable |

Information on health hazards

Other hazards

Product: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

| | |
|--|--------------------|
| Poly(oxy-1,2- Ethanediy), Alpha-Sulfo- Omega-(Nonylphenoxy)- Branched, Ammonium Salt | No data available. |
|--|--------------------|

| | |
|--|--------------------|
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω- hydroxy-, branched | No data available. |
|--|--------------------|

| | |
|---|---|
| 2,4,7,9-Tetramethyldec- 5-yne-4,7-diol | LC 50 (Pimephales promelas, 96 h): 36 mg/l LC 50 (Cyprinus carpio (Carp), 96 h): 42 mg/l NOEC (Cyprinus carpio (Carp), 96 h): 10 mg/l |
|---|---|

Aquatic Invertebrates

| | |
|---|---|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5-yne-4,7-diol | EC 50 (Daphnia magna, 48 h): 88 mg/l EC 50 (Daphnia magna, 48 h): 91 mg/l NOEC (Daphnia magna, 48 h): 43 mg/l |

Toxicity to Aquatic Plants

| | |
|---|--|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5-yne-4,7-diol | EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): 15 mg/l (OECD 201) EC 10 (Algae (Pseudokirchneriella subcapitata), 72 h): 1,8 mg/l (OECD 201) ErC50 (Algae (Pseudokirchneriella subcapitata), 72 h): 82 mg/l (OECD 201) |

Toxicity to microorganisms

| | |
|---|--|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt | No data available. |
| Poly(oxy-1,2-ethanediy), a-(nonylphenyl)-ω-hydroxy-, branched | No data available. |
| 2,4,7,9-Tetramethyldec-5-yne-4,7-diol | EC 50 (activated sludge, 3 h): Approximate 630 mg/l (OECD 209) |

Chronic hazards to the aquatic environment:

Fish

| | |
|---|--------------------|
| Product: | No data available. |
| Components: | |
| Poly(oxy-1,2-Ethanediy), Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt | No data available. |

Poly(oxy-1,2-ethanediyl),
 a-(nonylphenyl)-ω-
 hydroxy-, branched
 2,4,7,9-Tetramethyldec-
 5-yne-4,7-diol No data available.

Aquatic Invertebrates

Product: No data available.

Components:

Poly(oxy-1,2-
 Ethanediyl), Alpha-Sulfo-
 Omega-(Nonylphenoxy)-
 Branched, Ammonium
 Salt No data available.

Poly(oxy-1,2-ethanediyl),
 a-(nonylphenyl)-ω-
 hydroxy-, branched
 2,4,7,9-Tetramethyldec-
 5-yne-4,7-diol No data available.

Toxicity to Aquatic Plants

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediyl),
 Alpha-Sulfo-Omega-
 (Nonylphenoxy)-
 Branched, Ammonium
 Salt No data available.

Poly(oxy-1,2-ethanediyl),
 a-(nonylphenyl)-ω-
 hydroxy-, branched
 2,4,7,9-Tetramethyldec-5-
 yne-4,7-diol No data available.

Toxicity to microorganisms

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediyl),
 Alpha-Sulfo-Omega-
 (Nonylphenoxy)-
 Branched, Ammonium
 Salt No data available.

Poly(oxy-1,2-ethanediyl),
 a-(nonylphenyl)-ω-
 hydroxy-, branched
 2,4,7,9-Tetramethyldec-5-
 yne-4,7-diol EC 50 (activated sludge, 3 h): Approximate 630 mg/l (OECD 209)

Persistence and Degradability

Biodegradation

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediy), No data available.
 Alpha-Sulfo-Omega-
 (Nonylphenoxy)-
 Branched, Ammonium
 Salt

Poly(oxy-1,2-ethanediy), No data available.
 a-(nonylphenyl)-ω-
 hydroxy-, branched

2,4,7,9-Tetramethyldec-5- 5 % (28 d, OECD 301 B) The product is not biodegradable., aerobic
 yne-4,7-diol 8 - 12 % (60 d, OECD 301 B) The product is not biodegradable., aerobic
 25,4 % (57 d, OECD 302 A) The product is not biodegradable., aerobic

BOD/COD Ratio

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediy), No data available.
 Alpha-Sulfo-Omega-
 (Nonylphenoxy)-
 Branched, Ammonium
 Salt

Poly(oxy-1,2-ethanediy), No data available.
 a-(nonylphenyl)-ω-
 hydroxy-, branched

2,4,7,9-Tetramethyldec-5- No data available.
 yne-4,7-diol

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Components:

Poly(oxy-1,2-Ethanediy), No data available.
 Alpha-Sulfo-Omega-
 (Nonylphenoxy)-
 Branched, Ammonium
 Salt

Poly(oxy-1,2-ethanediy), No data available.
 a-(nonylphenyl)-ω-
 hydroxy-, branched

2,4,7,9-Tetramethyldec-5- No data available.
 yne-4,7-diol

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: not measured

Components:

Poly(oxy-1,2-Ethanediy), No data available.
 Alpha-Sulfo-Omega-
 (Nonylphenoxy)-
 Branched, Ammonium
 Salt

Poly(oxy-1,2-ethanediy), No data available.
 a-(nonylphenyl)-ω-
 hydroxy-, branched

2,4,7,9-Tetramethyldec-5-yne-4,7-diol Log Kow: 2,8 22 °C (OECD 117) Yes

Mobility in soil:

Product No data available.

Components:

Poly(oxy-1,2-Ethanediy), No data available.

Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt

Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω -hydroxy-, branched

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Product No data available.

Components:

Poly(oxy-1,2-Ethanediy), No data available.

Alpha-Sulfo-Omega-(Nonylphenoxy)-Branched, Ammonium Salt

Poly(oxy-1,2-ethanediy), a-(nonylphenyl)- ω -hydroxy-, branched

2,4,7,9-Tetramethyldec-5-yne-4,7-diol No data available.

Other adverse effects:

Other hazards

Product: Do not allow to enter soil, waterways or waste water canal.

13. Disposal considerations

Disposal methods: In accordance with local authority regulations, take to special waste incineration plant

Contaminated Packaging: If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

14. Transport information

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

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

Issue Date: 04.03.2019

Version #: 2.1

Further Information: No data available.

Revision Information: Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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