Product name: ANSULITE 1% FREEZE PROTECTED AFFF

1. Identification

1.1. Product Identifier
Product name: ANSULITE 1% FREEZE PROTECTED AFFF

1.2. Other means of identification
Product code: 415301
Synonyms: None
Chemical Family: No information available

1.3. Recommended use of the chemical and restrictions on use
Recommended use: Fire extinguishing agent.
Uses advised against: Consumer use.

1.4. Details of the Supplier of the Safety Data Sheet
Company Name: Tyco Fire Protection Products
One Stanton Street
Marinette, WI 54143-2542
Telephone: 715-735-7411

Contact point: Product Stewardship at 1-715-735-7411
E-mail address: psra@tycofp.com

1.5. Emergency Telephone Number
Emergency telephone: CHEMTREC 001-800-424-9300 or 001-703-527-3887

2. Hazards Identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral - Category 4
Serious eye damage/eye irritation - Category 2A

2.2. Label Elements

Signal Word
WARNING

Hazard Statements
Harmful if swallowed
Causes serious eye irritation

Revision date: 11-Jan-2019
Version: 26
Precautionary Statements

Prevention
Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

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

2.3. Hazards Not Otherwise Classified (HNOC)
Not Applicable.

2.4. Other Information

3. Composition/information on Ingredients

3.1. Mixture
The following component(s) in this product are considered hazardous under applicable OSHA(USA)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol</td>
<td>107-21-1</td>
<td>15 - 40</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Lauryl Iminopropionate, Sodium Salt</td>
<td>14960-06-6</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Polyfluorinated alkyl polyamide</td>
<td>Proprietary</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Octylphenoxypolyethoxyethanol</td>
<td>9036-19-5</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1. Description of first aid measures
General Advice If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact Wash skin with soap and water. Get medical attention if irritation develops and persists.
Inhalation Remove to fresh air. If breathing is difficult, give oxygen. (Get medical attention immediately if symptoms occur.).
Ingestion Rinse mouth. Do not induce vomiting without medical advice. If swallowed, call a poison control center or physician immediately.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed
Symptoms No information available.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
Note to physicians Treat symptomatically.

5. Fire-fighting measures
5.1. Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Unsuitable Extinguishing Media
None.

5.3. Specific Hazards Arising from the Chemical
None known.

5.4. Explosion Data
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

5.5. Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
- Personal Precautions: Ensure adequate ventilation, especially in confined areas.
- For emergency responders: Use personal protection recommended in Section 8.

6.2. Environmental Precautions
Environmental Precautions: Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up
- Methods for Containment: Prevent further leakage or spillage if safe to do so.
- Methods for Cleaning Up: Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1. Precautions for Safe Handling
- Advice on safe handling: Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
- Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place.
8. Exposure Controls/Personal Protection

8.1. Control Parameters

Exposure guidelines

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol 107-21-1</td>
<td>STEL: 50 ppm vapor fraction STEL: 10 mg/m³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction</td>
<td>-</td>
<td>-</td>
<td>100 mg/m³ (Ceiling)</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol 112-34-5</td>
<td>TWA: 10 ppm inhalable fraction and vapor</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists) OSHA (Occupational Safety and Health Administration of the US Department of Labor) NIOSH IDLH Immediately Dangerous to Life or Health

8.2. Appropriate Engineering Controls

Engineering controls
Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures, such as personal protective equipment

Eye/Face Protection
Avoid contact with eyes. Tight sealing safety goggles.

Skin and Body Protection
Wear protective gloves and protective clothing.

Respiratory Protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Ventilation
Use local exhaust or general dilution ventilation to control exposure with applicable limits.

8.4. General hygiene considerations
Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 100 °C / 212 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100 °C / &gt; 212 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
Flammability limit in air

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

VOC content (%) 48.857

10. Stability and Reactivity

10.1. Chemical Stability

Stable under recommended storage conditions.

10.2. Reactivity

No data available

10.3. Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization  Hazardous polymerization does not occur.

10.4. Conditions to Avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible Materials


10.6. Hazardous decomposition products


11. Toxicological Information

11.1. Information on Likely Routes of Exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product information</td>
<td>No data available</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No data available</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Severely irritating to eyes.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>May cause irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

Revision date  11-Jan-2019

Version  26
Component Information

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD₅₀</th>
<th>Dermal LD₅₀</th>
<th>Inhalation LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol 107-21-1</td>
<td>= 4700 mg/kg (Rat)</td>
<td>= 9530 µL/kg (Rabbit) = 10600 mg/kg (Rat)</td>
<td>-</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol 112-34-5</td>
<td>= 5660 mg/kg (Rat)</td>
<td>= 2700 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Octylphenoxypolyethoxyethanol 9036-19-5</td>
<td>= 4190 mg/kg (Rat) = 1700 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

11.2. Information on Toxicological Effects

Symptoms

No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin Corrosion/Irritation

Irritating to skin.

Serious eye damage/eye irritation

Severely irritating to eyes.

Carcinogenicity

No information available.

Reproductive Toxicity

No information available.

STOT - Single Exposure

No information available.

STOT - Repeated Exposure

No information available.

Target organ effects

Central Nervous System, Eyes, Respiratory System, Skin.

Aspiration Hazard

No information available.

11.4. Numerical Measures of Toxicity - Product information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1477 mg/kg

ATEmix (dermal) 14937 mg/kg

12. Ecological Information

12.1. Ecotoxicity

Not classified.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol 107-21-1</td>
<td>EC₅₀ (96h) 6500 - 13000 mg/L Pseudokirchneriella subcapitata</td>
<td>LC₅₀ (96h) static = 27540 mg/L Lepomis macrochirus LC₅₀ (96h) static = 40761 mg/L Oncorhynchus mykiss LC₅₀ (96h) = 41000 mg/L Oncorhynchus mykiss LC₅₀ (96h) static 14 - 18 mL/L Oncorhynchus mykiss LC₅₀ (96h) static = 16000 mg/L Poecilia reticulata LC₅₀ (96h) static 40000 - 60000 mg/L Pimephales promelas</td>
<td>EC₅₀ (48h) = 46300 mg/L Daphnia magna</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol 112-34-5</td>
<td>EC₅₀ (96h) &gt; 100 mg/L Desmodesmus subspicatus</td>
<td>LC₅₀ (96h) static = 1300 mg/L Lepomis macrochirus</td>
<td>EC₅₀ (48h) &gt; 100 mg/L Daphnia magna EC₅₀ (24h) = 2850 mg/L Daphnia magna</td>
</tr>
<tr>
<td>2-Methyl-2,4-pentanediol 107-41-5</td>
<td>-</td>
<td>LC₅₀ (96h) static = 10700 mg/L Pimephales promelas LC₅₀ (96h) static = 10000 mg/L Lepomis macrochirus LC₅₀ (96h) flow-through = 8690 mg/L Pimephales promelas LC₅₀ (96h) flow-through 10500 - 11000 mg/L Pimephales promelas</td>
<td>EC₅₀ (48h) = 2700 - 3700 mg/L Daphnia magna</td>
</tr>
</tbody>
</table>
### 12.2. Persistence and Degradability

No information available.

### 12.3. Bioaccumulation

No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol</td>
<td>-1.93</td>
</tr>
</tbody>
</table>

### 12.4. Other Adverse Effects

No information available

### 13. Disposal Considerations

#### 13.1. Waste Treatment Methods

**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Do not reuse container.

### 14. Transport Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>TDG</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>MEX</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>ICAO (air)</td>
<td>NOT REGULATED</td>
</tr>
<tr>
<td>IATA</td>
<td>NOT REGULATED</td>
</tr>
</tbody>
</table>
IMDG

NOT REGULATED

15. Regulatory Information

15.1. International Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

15.2. US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol - 107-21-1</td>
<td>1.0</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol - 112-34-5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic health hazard: No
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol</td>
<td>5000 lb</td>
<td>-</td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

15.3. US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals
U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol 107-21-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol 112-34-5</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>1-Octanol 111-87-5</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

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

NFPA
- Health Hazards: 2
- Flammability: 1
- Instability: 0
- Physical and chemical properties:

HMIS
- Health Hazards: 2
- Flammability: 1
- Physical Hazards: 0
- Personal Protection: X

Revision date: 11-Jan-2019
Revision note: No information available.
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet