Safety Data Sheet

This safety data sheet complies with the requirements of: 2012 OSHA Hazard Communication Standard (29CFR 1910.1200)

Product name ANSULITE 3% AFFF FP (AFC3B-FP29)

1. Identification

1.1. Product Identifier
Product name ANSULITE 3% AFFF FP (AFC3B-FP29)

1.2. Other means of identification
Product code 443107
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 7
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>Polyfluorinated alkyl betaine</td>
<td>Proprietary</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Lauryl Imino Propionate, Sodium Salt</td>
<td>14960-06-6</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.

| Hazardous Combustion Products | Carbon oxides, Fluorinated oxides, Nitrogen oxides (NOx), Oxides of sulfur |

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.

Incompatible Materials
8. Exposure Controls/Personal Protection

8.1. Control Parameters

8.1.1. 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</td>
<td>-</td>
<td>-</td>
<td>100 mg/m³ (Ceiling)</td>
</tr>
<tr>
<td></td>
<td>STEL: 10 mg/m³ inhalable particulate matter, aerosol only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA: 25 ppm vapor fraction</td>
<td></td>
<td></td>
<td></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

To 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>Light yellow</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</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>
<tr>
<td>Flammability limit in air</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
Upper flammability limit: No data available
Lower flammability limit: No data available
Vapor Pressure: No data available
Vapor Density: No data available
Specific gravity: No data available
Water Solubility: No data available
Solubility in Other Solvents: No data available
Partition coefficient: No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Kinematic viscosity: No data available

VOC content (%): 50.264

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

Product information

Inhalation
No data available.

Eye Contact
Severely irritating to eyes.

Skin contact
No data available.

Ingestion
Harmful if swallowed.

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>
</tbody>
</table>

11.2. Information on Toxicological Effects

Symptoms

No information available.

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) 1316 mg/kg

ATEmix (dermal) 18115 mg/kg

12. Ecological Information

12.1. Ecotoxicity

<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) &gt; 100 mg/L</td>
<td>Lepomis macrochirus LC50 (96h) static = 27540 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>1,2-Propanediol 57-55-6</td>
<td>EC50 (96h) = 19000 mg/L Pseudokirchneriella subcapitata</td>
<td>LC50 (96h) static = 51600 mg/L Oncorhynchus mykiss LC50 (96h) static = 51400 mg/L Pimephales promelas LC50 (96h) = 710 mg/L Pimephales promelas LC50 (96h) static 41 - 47 mL/L Oncorhynchus mykiss</td>
<td>EC50 (48h) Static &gt; 1000 mg/L Daphnia magna EC50 (24h) &gt; 10000 mg/L Daphnia magna</td>
</tr>
<tr>
<td>Polyethylene Glycol 25322-68-3</td>
<td>-</td>
<td>LC50 (24h) &gt; 5000 mg/L Carassius auratus</td>
<td>-</td>
</tr>
</tbody>
</table>

Concentrate

Method Biological Test Method: Acute Lethality Using Threespine Stickleback

Revision date 11-Jan-2019 Version 7
3% Solution

Method
Biological Test Method: Acute Lethality Using Threespine Stickleback (Gasterosteus aculeatus) (EPS 1/RM/10)

Species
Gasterosteus aculeatus

Endpoint type
LC50

Effective dose
67,090 mg/L

Exposure time
96h

12.2. Persistence and Degradability

Chemical Oxygen Demand (mg/L)

Concentrate
750,000

3% Solution
23,000

Concentrate Biological Oxygen Demand (mg/L)

<table>
<thead>
<tr>
<th></th>
<th>Biological Oxygen Demand (5 Day)</th>
<th>%BOD/COD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22000</td>
<td>2.93</td>
</tr>
<tr>
<td>Biological Oxygen Demand (10 Day)</td>
<td>440000</td>
<td>58.67</td>
</tr>
<tr>
<td>Biological Oxygen Demand (15 Day)</td>
<td>470000</td>
<td>62.67</td>
</tr>
<tr>
<td>Biological Oxygen Demand (20 Day)</td>
<td>500000</td>
<td>66.67</td>
</tr>
</tbody>
</table>

3% Solution Biological Oxygen Demand (mg/L)

<table>
<thead>
<tr>
<th></th>
<th>Biological Oxygen Demand (5 Day)</th>
<th>%BOD/COD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>300</td>
<td>1.30</td>
</tr>
<tr>
<td>Biological Oxygen Demand (10 Day)</td>
<td>13000</td>
<td>56.52</td>
</tr>
<tr>
<td>Biological Oxygen Demand (15 Day)</td>
<td>15000</td>
<td>65.22</td>
</tr>
<tr>
<td>Biological Oxygen Demand (20 Day)</td>
<td>16000</td>
<td>69.57</td>
</tr>
</tbody>
</table>

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

DOT: NOT REGULATED
TDG: NOT REGULATED
MEX: NOT REGULATED
ICAO (air): NOT REGULATED
IATA: NOT REGULATED
IMDG: NOT REGULATED

15. Regulatory Information

15.1. International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic health hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

Revision date 11-Jan-2019
Version 7
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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol - 107-21-1</td>
<td>Developmental</td>
</tr>
<tr>
<td>Perfluorooctanoic acid - 335-67-1</td>
<td>Developmental Toxicity</td>
</tr>
</tbody>
</table>

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</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>107-21-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>112-34-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2-Propanediol</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>57-55-6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>Personal Protection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Revision date 11-Jan-2019
Revision note SDS sections updated, 12.
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