Safety Data Sheet

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

Product name ANSULITE 6% AFFF (AFC6B)

1. Identification

1.1. Product Identifier
Product name ANSULITE 6% AFFF (AFC6B)

1.2. Other means of identification
Product code 443113
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 product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.2. Label Elements

Hazard Statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Precautionary Statements

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

2.4. Other Information

3. Composition/information on Ingredients

Revision date 13-Jan-2019 Version 3
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>2-(2-Butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Polyfluorinated alkyl polyamide</td>
<td>Proprietary</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1. Description of first aid measures
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

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>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>Color</td>
<td>Light yellow</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>7</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>No data available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</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>
<tr>
<td>Upper flammability limit:</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Solubility in Other Solvents</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>VOC content (%)</td>
<td>4.3925</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1.01</td>
<td></td>
</tr>
</tbody>
</table>

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**

No data available

**Inhalation**

No data available.

**Eye Contact**

No data available.

**Skin contact**

No data available.

**Ingestion**

No data available.

**Component Information**

**Acute Toxicity**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD$_{50}$</th>
<th>Dermal LD$_{50}$</th>
<th>Inhalation LC$_{50}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112-34-5</td>
<td>5660 mg/kg (Rat)</td>
<td>2700 mg/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>Polyfluorinated alkyl polyamide</td>
<td>&gt;2000 mg/kg</td>
<td>&gt;2000 mg/kg</td>
<td>&gt;5.11 mg/l</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

**Serious eye damage/eye irritation**

Mild Irritant.

**Component Information**

**Polyfluorinated alkyl polyamide**

<table>
<thead>
<tr>
<th>Method</th>
<th>species</th>
<th>Exposure Route</th>
<th>Effective dose</th>
<th>Exposure time</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 405: Acute Eye Irritation/Corrosion</td>
<td>Rabbit</td>
<td>eye</td>
<td></td>
<td></td>
<td>Class 4 on a 1 to 8 scale according to a modified Kay and Calandra classification system. Mild eye irritation</td>
</tr>
</tbody>
</table>

**Sensitization**

May cause sensitization by skin contact.

**Component Information**

**Polyfluorinated alkyl polyamide**

<table>
<thead>
<tr>
<th>Method</th>
<th>species</th>
<th>Exposure Route</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay</td>
<td>mouse</td>
<td>dermal</td>
<td>sensitizing</td>
</tr>
</tbody>
</table>
Germ Cell Mutagenicity
Non-clastogenic to human lymphocytes in vitro.

<table>
<thead>
<tr>
<th>Component Information</th>
<th>Method</th>
<th>species</th>
<th>Results</th>
</tr>
</thead>
</table>

Carcinogenicity
No information available.

Reproductive Toxicity
No information available.

STOT - Single Exposure
No information available.

STOT - Repeated Exposure
No information available.

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) 59588 mg/kg
ATEmix (dermal) 64355 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>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>Sodium Citrate 68-04-2</td>
<td>EC50 (96h) 18000 - 32000 mg/L Chlorella vulgaris</td>
<td>LC50 (96h) 18000 - 32000 mg/L Poecilia reticulata</td>
<td>EC50 (48h) 5600 - 10000 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>
<tr>
<td>t-Butanol 75-65-0</td>
<td>EC50 (72h) &gt; 1000 mg/L Desmodesmus subspicatus</td>
<td>LC50 (96h) flow-through = 6130 - 6700 mg/L Pimephales promelas</td>
<td>EC50 (48h) = 933 mg/L Daphnia magna EC50 (48h) Static = 4607 - 6577 mg/L Daphnia magna</td>
</tr>
<tr>
<td>1-Octanol 111-87-5</td>
<td>EC50 (48h) static = 14 mg/L Desmodesmus subspicatus</td>
<td>LC50 (96h) static = 17.68 mg/L Oncorhynchus mykiss LC50 (96h) flow-through = 11.4 - 12.9 mg/L Pimephales promelas</td>
<td>EC50 (24h) 15 - 26 mg/L Daphnia magna</td>
</tr>
<tr>
<td>4,4′-bis-(sulfostyryl)-biphenyl disodium salt 27344-41-8</td>
<td>EC50 (72h) = 10 mg/L Desmodesmus subspicatus EC50 (96h) = 10.0 - 11.0 mg/L Desmodesmus subspicatus</td>
<td>LC50 (96h) static = 76 mg/L Brachydanio rerio</td>
<td>EC50 (48h) = 1000 mg/L Daphnia magna</td>
</tr>
</tbody>
</table>

Concentrate

<table>
<thead>
<tr>
<th>Method</th>
<th>Biological Test Method: Acute Lethality Using Threespine Stickleback (Gasterosteus aculeatus) (EPS 1/RM/10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Gasterosteus aculeatus</td>
</tr>
<tr>
<td>Endpoint type</td>
<td>LC50</td>
</tr>
<tr>
<td>Effective dose</td>
<td>6780 mg/L</td>
</tr>
<tr>
<td>Exposure time</td>
<td>96h</td>
</tr>
</tbody>
</table>
6% Solution

Method: Biological Test Method: Acute Lethality Using Threespine Stickleback (Gasterosteus aculeatus) (EPS 1/RM/10)
Species: Gasterosteus aculeatus
Endpoint type: LC50
Effective dose: 113000 mg/L
Exposure time: 96h

Polyfluorinated alkyl polyamide

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Endpoint type</th>
<th>Effective dose</th>
<th>Exposure time</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Test No. 203: Fish, Acute Toxicity Test</td>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>LC50</td>
<td>&gt;14 mg/l</td>
<td>96h</td>
<td>NOEC: 14 mg/L No toxic effects at saturation.</td>
</tr>
<tr>
<td>OECD Test No. 201: Freshwater Alga and Cyanobacteria, Growth Inhibition Test</td>
<td>Algae</td>
<td>ErC50</td>
<td>&gt;15 mg/l</td>
<td>72h</td>
<td>Growth rate &gt;15, Yield 13, NOEC: 4.0 mg/L, LOEC: 8.5 mg/L</td>
</tr>
<tr>
<td>OECD Test No. 202: Daphnia sp., Acute Immobilization Test</td>
<td>Daphnia magna</td>
<td>EC50</td>
<td>&gt;20 mg/l</td>
<td>48h</td>
<td>NOEC: 20 mg/L No toxic effects at saturation.</td>
</tr>
</tbody>
</table>

12.2. Persistence and Degradability

Chemical Oxygen Demand (mg/L)

<table>
<thead>
<tr>
<th></th>
<th>Concentrate</th>
<th>6% Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrate</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>6% Solution</td>
<td>6,200</td>
<td></td>
</tr>
</tbody>
</table>

Concentrate Biological Oxygen Demand (mg/L)

<table>
<thead>
<tr>
<th></th>
<th>Biological Oxygen Demand (5 Day)</th>
<th>Biological Oxygen Demand (10 Day)</th>
<th>Biological Oxygen Demand (15 Day)</th>
<th>Biological Oxygen Demand (20 Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%BOD/COD</td>
<td>10</td>
<td>63</td>
<td>69</td>
<td>75</td>
</tr>
</tbody>
</table>

6% Solution Biological Oxygen Demand (mg/L)

<table>
<thead>
<tr>
<th></th>
<th>Biological Oxygen Demand (5 Day)</th>
<th>Biological Oxygen Demand (10 Day)</th>
<th>Biological Oxygen Demand (15 Day)</th>
<th>Biological Oxygen Demand (20 Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%BOD/COD</td>
<td>8.71</td>
<td>59.68</td>
<td>66.13</td>
<td>79.03</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulation

No information available.

12.4. Other Adverse Effects
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

- TSCA: Complies
- DSL/NDSL: Does not comply
- ENCS: Does not comply
- IECSC: Does not comply
- KECL: Does not comply
- PICCS: Does not comply
- AICS: Does not comply

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>2-(2-Butoxyethoxy)ethanol - 112-34-5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazard Categories**
- Acute Health Hazard: No
- 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, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**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>Perfluoroctanoic 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>2-(2-Butoxyethoxy)ethanol 112-34-5</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>t-Butanol 75-65-0</td>
<td>X</td>
<td>X</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: 1
- Flammability: 0
- Instability: 0
- Physical and chemical properties: *

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

**Revision date** 13-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