



Safety Data Sheet

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

Product name ANSULITE 1% AFFF (AFC1B)

1. Identification

1.1. Product Identifier

Product name ANSULITE 1% AFFF (AFC1B)

1.2. Other means of identification

Product code 443101
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)

Serious eye damage/eye irritation - Category 1
Skin Sensitization - Category 1B

2.2. Label Elements

Signal Word

DANGER

Hazard Statements

Causes serious eye damage
May cause an allergic skin reaction





Precautionary Statements

Prevention

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

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.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Disposal

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

2.3. Hazards Not Otherwise Classified (HNOC)

Not Applicable.

2.4. Other Information

May be harmful if swallowed.

3. Composition/information on Ingredients

3.1. Mixture

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

Chemical name	CAS No.	weight-%
2-(2-Butoxyethoxy)ethanol	112-34-5	10 - 30
Sodium Decyl Sulfate	142-87-0	1 - 5
Polyfluorinated alkyl betaine	Proprietary	1 - 5
Sodium Octyl Sulfate	142-31-4	1 - 5
Polyfluorinated alkyl polyamide	Proprietary	1 - 5

4. First aid measures

4.1. Description of first aid measures

General Advice	If symptoms persist, call a physician.
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



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Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Strong oxidizing agents. Strong acids. Strong bases.

8. Exposure Controls/Personal Protection

8.1. Control Parameters

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL
2-(2-Butoxyethoxy)ethanol 112-34-5	TWA: 10 ppm inhalable fraction and vapor	-	-	-

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

Physical State	Liquid	Color	Light yellow
Odor	Characteristic		
Odor Threshold	No data available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8.5	
Melting point/freezing point	No data available	
Boiling point / boiling range	No data available	
Flash Point	No data available	
Evaporation Rate	No data available	
Flammability (solid, gas)	No data available	
Flammability limit in air		
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor Pressure	No data available	



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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 (%)	25.4782
Density	1.02

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

Strong oxidizing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur. Fluorinated oxides.

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	May cause irritation.
Ingestion	May be harmful if swallowed.

Component Information

Acute Toxicity



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Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-(2-Butoxyethoxy)ethanol 112-34-5	= 5660 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-
Sodium Decyl Sulfate 142-87-0	= 1950 mg/kg (Rat)	-	-
Sodium Octyl Sulfate 142-31-4	= 3200 mg/kg (Rat)	-	-
Polyfluorinated alkyl polyamide	>2000 mg/kg	>2000 mg/kg	>5.11 mg/l

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.

Component Information					
Polyfluorinated alkyl polyamide					
Method	species	Exposure Route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Class 4 on a 1 to 8 scale according to a modified Kay and Calandra classification system. Mild eye irritation

Sensitization May cause sensitization by skin contact.

Component Information			
Polyfluorinated alkyl polyamide			
Method	species	Exposure Route	Results
OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay	mouse	dermal	sensitizing

Component Information		
Polyfluorinated alkyl polyamide		
Method	species	Results
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Non-clastogenic to human lymphocytes in vitro.

Carcinogenicity No information available.

Reproductive Toxicity No information available.

STOT - Single Exposure No information available.

STOT - Repeated Exposure No information available.

Chronic Toxicity Avoid repeated exposure.

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)	4874 mg/kg
ATEmix (dermal)	10216 mg/kg
ATEmix (inhalation-dust/mist)	321.4 mg/l

12. Ecological Information

12.1. Ecotoxicity



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Chemical name	Algae/aquatic plants	Fish	Crustacea
2-(2-Butoxyethoxy)ethanol 112-34-5	EC50 (96h) > 100 mg/L Desmodesmus subspicatus	LC50 (96h) static = 1300 mg/L Lepomis macrochirus	EC50 (48h) > 100 mg/L Daphnia magna EC50 (24h) = 2850 mg/L Daphnia magna
1,2-Propanediol 57-55-6	EC50 (96h) = 19000 mg/L Pseudokirchneriella subcapitata	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	EC50 (48h) Static > 1000 mg/L Daphnia magna EC50 (24h) > 10000 mg/L Daphnia magna
t-Butanol 75-65-0	EC50 (72h) > 1000 mg/L Desmodesmus subspicatus	LC50 (96h) flow-through 6130 - 6700 mg/L Pimephales promelas	EC50 (48h) = 933 mg/L Daphnia magna EC50 (48h) Static 4607 - 6577 mg/L Daphnia magna
1-Octanol 111-87-5	EC50 (48h) static = 14 mg/L Desmodesmus subspicatus	LC50 (96h) static = 17.68 mg/L Oncorhynchus mykiss LC50 (96h) flow-through 11.4 - 12.9 mg/L Pimephales promelas	EC50 (24h) 15 - 26 mg/L Daphnia magna
Formaldehyde 50-00-0	-	LC50 (96h) static 100 - 136 mg/L Oncorhynchus mykiss LC50 (96h) flow-through 0.032 - 0.226 mL/L Oncorhynchus mykiss LC50 (96h) flow-through 22.6 - 25.7 mg/L Pimephales promelas LC50 (96h) static 23.2 - 29.7 mg/L Pimephales promelas LC50 (96h) static = 41 mg/L Brachydanio rerio LC50 (96h) static = 1510 µg/L Lepomis macrochirus	LC50 (48h) = 2 mg/L Daphnia magna EC50 (48h) Static 11.3 - 18 mg/L Daphnia magna
4,4'-bis-(sulfostyryl)-biphenyl disodium salt 27344-41-8	EC50 (72h) = 10 mg/L Desmodesmus subspicatus EC50 (96h) 10.0 - 11.0 mg/L Desmodesmus subspicatus	LC50 (96h) static = 76 mg/L Brachydanio rerio	EC50 (48h) = 1000 mg/L Daphnia magna

Concentrate

Method	Biological Test Method: Acute Lethality Test Using Daphnia ssp. (EPS 1/RM/11)
Species	Daphnia magna
Endpoint type	LC50
Effective dose	564 mg/L
Exposure time	48h

Method	Biological Test Method: Acute Lethality Test Using Daphnia ssp. (EPS 1/RM/11)
Species	Daphnia magna
Endpoint type	EC50
Effective dose	556 mg/L
Exposure time	48h

Method	Biological Test Method: Acute Lethality Test Using Rainbow Trout (EPS 1/RM/9)
Species	Oncorhynchus mykiss (rainbow trout)
Endpoint type	LC50
Effective dose	2,140 mg/L
Exposure time	96h



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1% Solution	
Method	Biological Test Method: Acute Lethality Test Using Daphnia ssp. (EPS 1/RM/11)
Species	Daphnia magna
Endpoint type	LC50
Effective dose	93,350 mg/L
Exposure time	48h
Method	Biological Test Method: Acute Lethality Test Using Rainbow Trout (EPS 1/RM/9)
Species	Oncorhynchus mykiss (rainbow trout)
Endpoint type	LC50
Effective dose	153,000 mg/L
Exposure time	96h
Method	Biological Test Method: Acute Lethality Using Threespine Stickleback (Gasterosteus aculeatus) (EPS 1/RM/10)
Species	Gasterosteus aculeatus
Endpoint type	LC50
Effective dose	74,830 mg/L
Exposure time	96h
Method	Biological Test Method: Acute Lethality Test Using Daphnia ssp. (EPS 1/RM/11)
Species	Daphnia magna
Endpoint type	EC50
Effective dose	60,440 mg/L
Exposure time	48h

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

12.2. Persistence and Degradability

Chemical Oxygen Demand (mg/L)

Concentrate	580,000
1% Solution	6,100



Concentrate Biological Oxygen Demand (mg/L)

Biological Oxygen Demand (5 Day)	180000
%BOD/COD	31.03
Biological Oxygen Demand (10 Day)	380000
%BOD/COD	65.51
Biological Oxygen Demand (15 Day)	440000
%BOD/COD	75.86
Biological Oxygen Demand (20 Day)	450000
%BOD/COD	77.59

1% Solution Biological Oxygen Demand (mg/L)

Biological Oxygen Demand (5 Day)	2300
%BOD/COD	37.70
Biological Oxygen Demand (10 Day)	4400
%BOD/COD	72.13
Biological Oxygen Demand (15 Day)	4800
%BOD/COD	78.69
Biological Oxygen Demand (20 Day)	5000
%BOD/COD	81.97

12.3. Bioaccumulation

No information available.

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**

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

Chemical name	SARA 313 - Threshold Values %
2-(2-Butoxyethoxy)ethanol - 112-34-5	1.0

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, 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

15.3. US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Formaldehyde - 50-00-0	Carcinogen
Perfluorooctanoic acid - 335-67-1	Developmental Toxicity

U.S. State Right-to-Know Regulations



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Chemical name	New Jersey	Massachusetts	Pennsylvania
2-(2-Butoxyethoxy)ethanol 112-34-5	X	-	X
1-Octanol 111-87-5	-	-	X
Formaldehyde 50-00-0	X	X	X

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

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