SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision date 08-Jan-2026 **Revision Number** 4

1. Identification

Product identifier

Product name ANSUL NFF-332 3x3 AR-SFFF

Other means of identification

Product code A16382TDYK

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Class A Class B Fire fighting foam

Uses advised against Consumer use

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

E-mail psra@jci.com

Company Phone Number Product Stewardship at +1-715-735-7411

Emergency telephone CHEMTREC 001-800-424-9300 or 001-703-527-3887

2. Hazard(s) identification

Classification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Serious eye damage/eye irritation	Category 2

Label elements
Signal word
Warning

Hazard Statements
Causes serious eye irritation

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear eye protection/ face protection

Precautionary Statements - Response

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

Hazards not otherwise classified (HNOC)
Not applicable

Other information
Harmful to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical name	CAS No.	Weight-%	Trade secret
2-(2-Butoxyethoxy)ethanol	112-34-5	1 - 5	-
Fatty Alcohol Sulfate, TEA-salt	139-96-8	3 - 7	-

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air.

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	Irritating. May cause redness and tearing of the eyes.
Effects of Exposure	No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	No information available.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

Environmental Precautions

Environmental Precautions	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

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

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Do not freeze. Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

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

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and Body Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact

Respiratory Protection In case of insufficient ventilation, wear suitable respiratory equipment Wear a respirator conforming to EN 140 with Type A filter or better

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

General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Turbid
Color	pale yellow
Odor	Slight sweetness - surfactant
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	7-8	None known
pH (as aqueous solution)		None known
Melting point / freezing point	-4 °C / 24.8 °F	None known
Initial boiling point and boiling range	Not applicable	None known
Flash point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability	Not flammable	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Soluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	2000 - 3000 mPa s	None known

Other information

Explosive properties	Not Explosive
Oxidizing properties	Not Oxidizing
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Refractive Index	1.3976-1.4176
Bulk density	1.13 g/ml

10. Stability and reactivity

Reactivity	Not reactive.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Extremes of temperature and direct sunlight.

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Causes serious eye irritation. May cause redness, itching, and pain.

Skin contact Non Corrosive.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation.

Acute toxicity .

Product information

Method	species	Exposure Route	Effective dose	Exposure time	Results
U.S. EPA Health Effects Test Guidelines, OPPTS 870.1100, Acute Oral Toxicity	Rat	oral	>5000 mg/kg		LD50 >5000 mg/kg (Data taken from similar finished product)

Numerical measures of toxicity

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

ATEmix (oral) 21,314.40 mg/kg
ATEmix (dermal) 22,865.80 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-(2-Butoxyethoxy)ethanol 112-34-5	= 5660 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-

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

Skin corrosion/irritation Non Corrosive.

Method	species	Exposure Route	Effective dose	Exposure time	Results
OECD Test No. 431: In Vitro Skin Corrosion: Human Skin Model Test	EpiDerm™	in vitro			non-corrosive

Serious eye damage/eye irritation Causes serious eye irritation.

Method	species	Exposure Route	Effective dose	Exposure time	Results

U.S. EPA Health Effects Test Guidelines, OPPTS 870.2400 , Ocular Irritation	Rabbit	eye		24 hours	Mild eye irritation

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Eyes.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	LC50	32.96 mg/L	96 hours	NOEC: 12.5 mg/l
OECD Test No. 202: Daphnia sp., Acute Immobilization Test	Daphnia magna	EC50	53 mg/L	48 hours	EC50 53 mg/l
OECD Test No. 201: Freshwater Alga and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	ErC50	78 mg/L	72 hours	ErC50: 78 mg/l
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	Activated sludge microorganisms	NOEC	50 mg/L		NOEC: 50 mg/l

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-(2-Butoxyethoxy)ethan	EC50: >100mg/L (96h,	LC50: =1300mg/L (96h,	-	EC50: >100mg/L (48h,

ol 112-34-5	Desmodesmus subspicatus)	Lepomis macrochirus)		Daphnia magna)

Persistence and degradability Inherently biodegradable.

Method	Exposure time	VALUE	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	28 days	59.6 %	Inherently biodegradable

Test Method for BOD and COD: U.S. EPA SM 5210 B and SM 5220 D.

Concentrate Biological Oxygen Demand (mg/L)

Biological Oxygen Demand (5 Day)	363600 mg/L
%BOD/COD	57.77 %
Biological Oxygen Demand (10 Day)	414800 mg/L
%BOD/COD	65.90 %
Biological Oxygen Demand (15 Day)	427200 mg/L
%BOD/COD	67.87 %
Biological Oxygen Demand (20 Day)	435600 mg/L
%BOD/COD	69.21 %
Biological Oxygen Demand (25 Day)	452800 mg/L
%BOD/COD	71.94 %
Biological Oxygen Demand (30 Day)	489200 mg/L
%BOD/COD	77.72 %
Chemical Oxygen Demand (mg/L)	629400 mg/L

3% Solution Biological Oxygen Demand (mg/L)

Biological Oxygen Demand (5 Day)	11120 mg/L
%BOD/COD	59.89 %
Biological Oxygen Demand (10 Day)	12680 mg/L
%BOD/COD	68.30 %
Biological Oxygen Demand (15 Day)	12850 mg/L
%BOD/COD	69.21 %
Biological Oxygen Demand (20 Day)	12680 mg/L
%BOD/COD	68.30 %
Biological Oxygen Demand (25 Day)	13740 mg/L
%BOD/COD	74.01 %
Biological Oxygen Demand (30 Day)	14980 mg/L
%BOD/COD	80.68 %
Chemical Oxygen Demand (mg/L)	18565 mg/L

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
2-(2-Butoxyethoxy)ethanol 112-34-5	1

Mobility No information available.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

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

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AIIC	Complies
NZIoC	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
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
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

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
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
2-(2-Butoxyethoxy)ethanol 112-34-5	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 0	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 0	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Key or legend to abbreviations and acronyms used in the safety data sheet
Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date	08-Jan-2026
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