



MATERIAL SAFETY DATA SHEET #NMS210

Aer-O-Water 3EM

AQUEOUS FILM FORMING FOAM (AFFF) Liquid Concentrate

Section 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Product: Aer-O-Water 3EM, Fire Fighting Foam Concentrate
Synonyms: Aqueous Film Forming Foam (AFFF)
CAS No: Mixture - No single CAS # applicable

Company Identification

Manufacturer:

National Foam, Inc.
150 Gordon Drive
P.O. Box 695
Exton, PA 19341-0695
Emergency Phone Number (Red Alert): (610) 363-1400 (U.S.A.)
Fax (610) 524-9073
www.nationalfoam.com
www.Kidde-Fire.com

Section 2. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS Number
Water	7732-18-5
2-(2-Butoxyethoxy) Ethanol; Diethylene Glycol Monobutyl Ether	112-34-5
Ethylene Glycol; 1, 2 Ethanediol	107-21-1
Synthetic Detergents	Proprietary Mixture, no single CAS Number applicable
Fluoroalkyl Surfactant	Confidential

Section 3. HAZARDS IDENTIFICATION

Potential Health Effects

Inhalation

Vapors are minimal at room temperature. If product is heated or sprayed as an aerosol, airborne material may cause respiratory irritation.

Skin Contact

Contact with liquid may cause moderate irritation or dermatitis due to removal of oils from the skin.

Eye Contact

Product is an eye irritant.

Ingestion

Not a hazard in normal industrial use. Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing large amounts may cause injury or irritation.

Additional Health Effects

Existing eye or skin sensitivity may be aggravated by exposure.

Carcinogenicity Information

No data available.

Section 4. FIRST AID MEASURES

Inhalation

No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of airborne aerosol mists, remove to fresh air. Seek medical attention if effects occur.

Skin Contact

In case of skin contact, wash off in flowing water or shower. Launder clothing before reuse.

Eye Contact

In case of eye contact, flush eyes promptly with water for 15 minutes. Retract eyelids often to ensure thorough rinsing. Consult a physician if irritation persists.

Ingestion

Swallowing less than an ounce is not expected to cause significant harm. For larger amounts, do not induce vomiting. Give milk or water. Never give anything by mouth to an unconscious person. Seek medical attention.

Section 5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point – Not applicable

Fire and Explosion Hazards

Avoid contact with water reactive materials, burning metals and electrically energized equipment.

Extinguishing Media

Product is an extinguishing media. Use media appropriate for surrounding materials.

Special Fire Fighting Instructions

This product will produce foam when mixed with water.

Section 6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (Personnel) sections before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up.

Accidental Release Measures

Concentrate

Stop flow if possible. Use appropriate protective equipment during clean up. For small volume releases, collect spilled concentrate with absorbent material; place in approved container. For large volume releases, contain and collect for use where possible. Flush area with water until it no longer foams. Exercise caution, surfaces may be slippery. Prevent discharge of concentrate to waterways. Disposal should be made in accordance with federal, state and local regulations.

Foam/Foam Solution

See above. Flush with water. Prevent discharge of foam/foam solution to waterways. Do not discharge into biological sewer treatment systems without prior approval. Disposal should be made in accordance with federal, state and local regulations.

Section 7. HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin or clothing. Avoid ingestion or inhalation. Rinse skin and eyes thoroughly in case of contact. Review HAZARDS and FIRST AID sections.

Storage

Recommended storage environment is between 35°F (2°C) and 120°F (49°C). Store product in original shipping container or tanks designed for product storage.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Special ventilation is not required.

Personal Protective Equipment

Respiratory

Recommended exposure limits (OSHA-PEL and ACGIH-TLV) have not been determined for this material. The need for respiratory protection should be evaluated by a qualified health specialist.

Protective Clothing

Rubber or PVC gloves recommended.

Eye Protection

Safety glasses, face shield or chemical splash goggles must be worn when possibility exists for eye contact. Contact lenses should not be worn. Eye wash facilities are recommended.

Other Hygienic Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before re-use.

Exposure Guidelines

Exposure Limits

Component	CAS Number	PEL (OSHA)	TLV (ACGIH)
2-(2-Butoxyethoxy)Ethanol	112-34-5	none	none
Ethylene Glycol	107-21-1	50 ppm	50 ppm
Ethanol	64-17-5	1000 ppm	1000ppm

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Melting Point:	Not applicable
Evaporation Rate:	<1 (Butyl Acetate = 1.0)
Solubility in Water:	100%
pH:	8.0

Specific Gravity:	1.04 @ 25°C
Odor:	Mild, pleasant
Form:	Liquid
Color:	Straw yellow

Section 10. STABILITY AND REACTIVITY

Chemical Stability

Stable.

Incompatibility, Materials to Avoid

Avoid use of product on burning metals, electrically-energized equipment and contact with water reactive materials.

Polymerization

Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Mammalian Toxicity

This product has not been tested as a whole for acute oral and inhalation toxicity, primary eye irritation, or primary skin irritation.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicological Information Aquatic Toxicity

96 hr. Flow Through LC₅₀ for Saltwater Minnows (*Fundulus heteroclitus*) is reported to be greater than 500 ppm.

Environmental Fate

BOD₂₀ Concentrate 480,000 mg/kg

COD Concentrate 516,000 mg/kg

Section 13. DISPOSAL CONSIDERATIONS

Concentrate

Do not discharge into biological sewer treatment systems without prior approval. Specific concerns are high BOD load and foaming tendency. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

Foam/Foam Solution

Aer-O-Water 3EM foam solution can be treated by waste water treatment facilities. Discharge into biological sewer treatment facilities may be done with prior approval. Specific concerns are high BOD load. Dilution will reduce BOD and COD factors proportionately. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

NOTE: As a service to our customers, National Foam has approvals in place with disposal facilities throughout the U.S. for waste water treatment and solidification and landfill of our foam liquid concentrates and foam solutions. If required, National Foam, Inc. can also provide information on the disposal of drums used for shipping our concentrates. Please contact National Foam's Risk Management Administrator at (610) 363-1400 for additional information.

.

Section 14. TRANSPORTATION INFORMATION

Shipping Information

Proper Shipping Name: Fire Extinguisher Charges or Compounds N.O.I., Class 60

National Motor Freight Code: 69160 Sub 0

Hazard Class: None

UN Number: None

Section 15. REGULATORY INFORMATION

U.S. Federal Regulations

Toxic Substances Control Act (TSCA)

All components of this product are listed in the TSCA inventory.

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

Section 302/304

There are no components of this material with known CAS numbers which are on the Extremely Hazardous Substances (EHS) list.

Section 311 & 312

Based on available information, this material contains the following components which are classified as the following health and/or physical hazards according to Section 311 & 312:

2-(2-Butoxyethoxy)Ethanol	112-34-5	Health - Immediate
Ethylene Glycol	107-21-1	Health - Immediate and Chronic
Ethanol	64-17-5	Health -Immediate and Chronic, Flammability

Section 313

This material contains the following chemical components subject to Section 313 reporting requirements.

2-(2-Butoxyethoxy)Ethanol	112-34-5
Ethylene Glycol	107-21-1

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

This material contains the following components subject to the reporting requirements of CERCLA

Ethylene Glycol	107-21-1	8% by weight maximum
2-(2-Butoxyethoxy) Ethanol	112-34-5	12% by weight maximum

OTHER REGULATORY INFORMATION

None.

STATE REGULATIONS

PENNSYLVANIA RIGHT-TO-KNOW HAZARDOUS SUBSTANCES LIST

PA Hazardous Substances present at levels greater than 1%:

2-(2-Butoxyethoxy) Ethanol 112-34-5

Ethylene Glycol 107-21-1

Ethanol 64-17-5

Section 16. OTHER INFORMATION

NFPA Rating

Health 0
Flammability 0
Reactivity 0

ADDITIONAL INFORMATION

Revision Summary

1/20/00 Updated Section 15
2/5/99 Added MSDS number, updated Sections 1,2,3,4,6,7,9,11,12,13,15.
10/2/96 Revised to ANSI Format.
08/10/00 Revised Section 1 and 2

For further information, see National Foam Product Data Sheet for Aer-O-Water 3EM.

The information contained herein is furnished without warranty either expressed or implied. This data sheet is not a part of any contract of sale. The information contained herein is believed to be correct or is obtained from sources believed to be generally reliable. However, it is the responsibility of the user of these materials to investigate, understand and comply with federal, state and local guidelines and procedures for safe handling and use of these materials. National Foam, Inc. shall not be liable for any loss or damage arising directly or indirectly from the use of this product and National Foam, Inc. assumes no obligation or liabilities for reliance on the information contained herein or omissions herefrom.

August 10, 2000