
1. IDENTIFICATION

Product Name	Aer-O-Foam® XL-3 ^{C6} Fluoroprotein Foam Concentrate
Recommended use of the chemical and restrictions on use	
Identified uses	Firefighting Foam Concentrate
Restrictions on Use	See Section 15
Company Identification	National Foam 350 East Union Street West Chester, PA 19382
Customer Information Number	(610) 363-1400
Emergency Telephone Number	Infotrac at (800) 535-5053
Issue Date	May 18, 2021
Supersedes Date	December 9, 2020
<i>Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)</i>	

2. HAZARD IDENTIFICATION

Hazard Classification

Eye Damage/Irritation - Category 2A
Skin Corrosion/Irritation - Category 2
Specific Target Organ Toxicity (Repeated Exposure) - 2
Skin Sensitizer - Category 1

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Causes serious eye irritation.
Causes skin irritation.
May cause damage to organs (kidney) through prolonged or repeated exposure (oral).
May cause and allergic skin reaction.

Precautionary Statements**Prevention**

Wash hands thoroughly after handling.
Wear eye protection, face protection and protective gloves.
Avoid breathing mist, vapors or spray.
Contaminated work clothing must not be allowed out of the workplace.

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.
If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take of contaminated clothing and wash it before reuse.
Get medical advice/attention if you feel unwell.

2. HAZARD IDENTIFICATION

Storage

None

Disposal

Dispose of contents/container in accordance with local regulation.

Other Hazards

This product contains fluoroalkyl surfactants which are and include PFAS (per- or poly- fluoroalkyl substances) and is required to be disposed of by high temperature incineration. See Sections 13 and 15 for additional information.

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	30 - 40%
Acute dermal toxicity	30 - 40%
Acute inhalation toxicity	40 - 50%
Acute aquatic toxicity	40 - 50%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Hexylene Glycol	107-41-5	1 - 5%
Ethylene Glycol	107-21-1	1 - 5%
Ferrous Sulfate	7720-78-7	1 - 5%
Zinc Chloride	7646-85-7	0.1 - 1%
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	4719-04-4	0.1 - 1%

*Exact concentration withheld as trade secret.

This product contains fluoroalkyl surfactants which are and include PFAS (per- or poly- fluoroalkyl substances). See Sections 13 and 15 for additional information.

4. FIRST- AID MEASURES

Description of necessary first-aid measures**Eyes**

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

4. FIRST- AID MEASURES

Indication of immediate medical attention and special treatment needed**Notes to Physicians**

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved.

Specific hazards arising from the chemical

None known

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Prevent skin and eye contact.

Environmental Precautions

Environmental exposure controls: Observe local/national regulations on emissions. Ensure all local/national regulations are observed.

Prevent foam concentrate or foam solution from entering ground water, surface water, or storm drains. Discharge and disposal of concentrate or foam solution should be made in accordance with federal, state, and local regulations. See Section 13 for disposal requirements.

Methods and materials for containment and cleaning up

Contain and absorb using appropriate inert material and transfer into suitable containers for recovery or disposal. See Section 13 for disposal requirements.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective clothing. Prevent skin and eye contact.

Conditions for safe storage

Store in original containers between 20°F and 120°F (-7°C and 49°C). Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Ethylene Glycol

ACGIH TLVs: TWA 25 ppm (vapor fraction),

STEL 50 ppm (vapor fraction), 10 mg/m³ (aerosol only, measured as inhalable fraction of the aerosol)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hexylene Glycol

ACGIH TLVs: TWA 25 ppm (vapor fraction),
STEL 50 ppm (vapor fraction), 10 mg/m³ (aerosol only, measured as inhalable fraction of
the aerosol)

Ferrous Sulfate as Iron Salts, Soluble, as Fe

ACGIH TLV: 1 mg/m³ 8h TWA

Zinc Chloride, fume

ACGIH TLV: 1 mg/m³ 8h TWA, 15-minute STEL is: 2 mg/m³

OSHA PEL: 1 mg/m³

2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol

None established

Appropriate engineering controls

Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

Individual protection measures**Respiratory Protection**

Wear respiratory protection if there is a risk of exposure. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Skin Protection

Rubber or PVC Gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

	Physical State	Liquid
	Color	Dark brown
Odor		Organic
Odor Threshold		No data available
pH		7.3
Specific Gravity		1.16
Boiling Range/Point (°C/F)		No data available
Melting Point (°C/F)		No data available
Flash Point (°C/F)		>200°F
Vapor Pressure		No data available
Evaporation Rate (BuAc=1)		No data available
Solubility in Water		Soluble
Vapor Density (Air = 1)		Not applicable
VOC (%)		No data available
Partition coefficient (n-octanol/water)		No data available
Viscosity		No data available
Auto-ignition Temperature		Not applicable
Decomposition Temperature		No data available
Upper explosive limit		Not applicable

9. PHYSICAL AND CHEMICAL PROPERTIES

Lower explosive limit Not applicable
Flammability (solid, gas) Not applicable

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Contact with incompatible materials

Incompatible Materials

Water reactive materials – burning metals – electronically energized equipment

Hazardous Decomposition Products

Oxides of carbon – hydrogen fluoride – aldehydes – ketones – organic acids – sulfur oxides – iron oxides

11. TOXICOLOGICAL INFORMATION

Acute ToxicityEthylene Glycol

Minimum lethal dose in humans: 1600 mg/kg body weight (estimate)

LD50 Dermal (rabbit) >3500 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure

Available data indicates this product is not expected to cause target organ effects after a single exposure.

Specific Target Organ Toxicity (STOT) – repeat exposure

Ethylene Glycol: May cause damage to organs (kidney) through prolonged or repeated exposure (oral).

Serious Eye damage/Irritation

Hexylene Glycol: Causes serious eye irritation.

Ferrous Sulfate: Causes serious eye irritation.

Zinc Chloride: Causes severe skin burns and eye damage.

Skin Corrosion/Irritation

Ferrous Sulfate: Skin irritant in rabbit tests.

Zinc Chloride: Causes severe skin burns and eye damage. A 1 % w/v zinc chloride was found to be moderately irritating to guinea-pig skin, and severely irritating to mouse and rabbit skin.

Respiratory or Skin Sensitization

2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol: Classified as skin sensitizer at ≥ 0.1% (ECHA)

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

11. TOXICOLOGICAL INFORMATION

Germ Cell Mutagenicity

Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity

Available data indicates this product is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

EcotoxicityZinc Chloride:

LC50 Carp 0.4 -2.2 mg/l 96hr

EC50 Daphnia Magna 0.2 mg/l 48 hr

Aquatic Chronic – Category 1, Very toxic to aquatic life with long lasting effects. (ECHA classification.)

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

This product contains PFAS (per- or poly- fluoroalkyl substances). Local requirements for waste disposal may be more restrictive or otherwise different from national regulations. Therefore, applicable local and state regulatory agencies should be contacted regarding disposal of waste foam concentrate or foam/foam solution.

Concentrate

Prevent foam concentrate from entering ground water, surface water or storm drains. Small quantities of foam concentrate may be collected on absorbents which can then be disposed of. Disposal should be made in accordance with local, state and federal regulations. High temperature incineration is required at a minimum of 1000°C with a minimum residence time of 2 seconds per the United States Environmental Protection Agency's Significant New Use Rule for a component of this product. See 40 CFR721.10700.

Foam/Foam Solution

Prevent foam/foam solution from entering ground water, surface water or storm drains. Small quantities of foam solution may be collected on absorbents which can then be disposed of. Disposal should be made in accordance with local, state and federal regulations. High temperature incineration is required at a minimum of 1000°C with a minimum residence time of 2 seconds per the United States Environmental Protection Agency's Significant New Use Rule for a component of this product. See 40 CFR721.10700.

NOTE: Please consult National Foam for additional information regarding the disposal of foam concentrates and foam solutions or visit <http://nationalfoam.com/use-discharge-and-disposal-of-firefighting-foam-products/>

14. TRANSPORT INFORMATION

Shipping Information**Shipping Description****National Motor Freight Code**

Fire Extinguisher Charges or Compounds N.O.I., Class 70

69160 Sub 0

This information is not intended to convey all transportation classifications that may apply to this product. Classifications may vary by container volume and by regional regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules when transporting this material.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product contains an ingredient that has restricted use under the EPA Toxic Substance Control Act and is subject to a Significant New Use Rule (40CFR721.10700). This product may only be used as a fire fighting foam. Any other use of this product is strictly prohibited. Disposal of this product must be done by incineration at a minimum of 1000°C with a minimum residence time of 2 seconds.

Canada DSL Inventory

This product contains an ingredient that is not listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

SARA Title III Sect. 311/312 Categorization

Eye Irritation – Skin Irritation – Skin Sensitizer – Specific Target Organ Toxicity (repeated exposure)

SARA Title III Sect. 313

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: Ethylene Glycol

California Proposition 65

WARNING: This product can expose you to chemicals including acetaldehyde, 1,4 dioxane and diethanolamine, which are known to the State of California to cause cancer, and perfluorooctanoic acid and ethylene glycol, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to

www.p65warnings.ca.gov/

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Ethylene Glycol (107-21-1) 4% by weight maximum

Ferrous Sulfate (7720-78-7) 2% by weight maximum

Zinc Chloride (7646-85-7) 1% by weight maximum

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

BOD₅: Biochemical Oxygen Demand (5 day)

CAS#: Chemical Abstracts Service Number

16. OTHER INFORMATION

Legend, cont.

COD: Chemical Oxygen Demand

EC50: Effect Concentration 50%

IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RQ: Reportable Quantity

STEL: Short Term Exposure Limit

N/A: Denotes no applicable information found or available

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RQ: Reportable Quantity

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Revision Date: May 18, 2021

Replaces: December 9, 2020

Changes made: Updates to sections 2, 6 and 13 and 15.

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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