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**1. IDENTIFICATION**

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<b>Product Name</b>	Avio <sup>F3</sup> Green Mil 3% Fluorine Free Foam Concentrate
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Identified uses</b>	Firefighting Foam Concentrate
<b>Restrictions on Use</b>	See product data sheet
<b>Company Identification</b>	National Foam 350 East Union Street West Chester, PA 19382
<b>Customer Information Number</b>	(610) 363-1400
<b>Emergency Telephone Number</b>	Infotrac at (800) 535-5053
<b>Issue Date</b>	February 16, 2024
<b>Supersedes Date</b>	November 1, 2023
<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>	

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**2. HAZARD IDENTIFICATION**

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**Hazard Classification**

Skin corrosion/irritation - Category 2  
Eye Damage/Irritation - Category 1

**Label Elements**

Hazard Symbols



Signal Word: Danger

**Hazard Statements**

Causes skin irritation.  
Causes serious eye damage.

**Precautionary Statements****Prevention**

Wash hands thoroughly after handling.  
Wear protective gloves, eye protection and face protection.

**Response**

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.

**Storage**

None

**Disposal**

Dispose of contents/container in accordance with local regulation.

**Other Hazards**

None identified.

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**2. HAZARD IDENTIFICATION**

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**Specific Concentration Limits**

No available data.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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This product is a mixture.

<b>Component</b>	<b>CAS Number</b>	<b>Concentration*</b>
Diethylene Glycol Monobutyl Ether;	112-34-5	10 - 30%
Sodium C14-16 Olefin Sulfonate;	68439-57-6	1 - 10%
Lauramidopropyl betaine;	4292-10-8	4 – 10%
Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, compds with triethanolamine;	90583-18-9	1 – 4 %
Sodium octyl sulphate;	142-31-4	1 – 4%
Lauramine oxide;	1643-20-5	1 - 4%
Sodium tolyltriazole;	64665-57-2	0.05 – 1%

\*Exact concentration withheld as trade secret.

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**4. FIRST- AID MEASURES**

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

Immediately flood the eye with plenty of water for at least 20 minutes, holding the eye open. Obtain medical attention.

**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. Do not induce vomiting.

**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.

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

Treat symptomatically.

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**5. FIRE - FIGHTING MEASURES**

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**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.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures**

Wear appropriate protective clothing. Prevent skin and eye contact.

**Environmental Precautions**

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.

**Methods and materials for containment and cleaning up**

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

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**7. HANDLING AND STORAGE**

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**Precautions for safe handling**

Wear appropriate protective clothing. Prevent skin and eye contact.

**Conditions for safe storage**

Store in original containers between 35°F and 120°F (2°C and 49°C). Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Control parameters**

Exposure limits are listed below, if they exist.

**Diethylene Glycol Monobutyl Ether**

ACGIH TLV: 10 ppm (67.5 mg/m<sup>3</sup>), 8hr TWA, measured as inhalable fraction and vapor

**Lauramine oxide**

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**

Chemical resistant gloves

**Eye/Face Protection**

Chemical goggles or safety glasses with side shields.

**Body Protection**

Normal work wear.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

<b>Physical State</b>	Liquid
<b>Color</b>	Yellow
<b>Odor</b>	Characteristic
<b>Odor Threshold</b>	No data available
<b>pH</b>	7.5 – 8.5
<b>Specific Gravity</b>	1.06
<b>Boiling Range/Point (°C/F)</b>	No data available
<b>Melting Point (°C/F)</b>	No data available
<b>Flash Point (°C/F)</b>	>200°F
<b>Vapor Pressure</b>	No data available
<b>Evaporation Rate (BuAc=1)</b>	No data available
<b>Solubility in Water</b>	Soluble
<b>Vapor Density (Air = 1)</b>	Not applicable
<b>VOC (%)</b>	No data available
<b>Partition coefficient (n-octanol/water)</b>	No data available
<b>Viscosity</b>	No data available
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	No data available
<b>Upper explosive limit</b>	Not applicable
<b>Lower explosive limit</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not applicable

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**10. STABILITY AND REACTIVITY**

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**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 – alkali metals – oxidizing agents

**Hazardous Decomposition Products**

Oxides of carbon – sulfur oxides – nitrogen oxides – sodium oxides

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**11. TOXICOLOGICAL INFORMATION**

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**Acute Toxicity**

Diethylene Glycol Monobutyl Ether

Oral LD50 (rat) 3305 mg/kg

Dermal LD5 (rabbit) 2764 mg/kg

Lauramine oxide

Oral LD50 rat >1500 mg/kg

**Specific Target Organ Toxicity (STOT) – single exposure**

No relevant studies identified.

**Specific Target Organ Toxicity (STOT) – repeat exposure**

No relevant studies identified.

**Serious Eye damage/Irritation**

Diethylene Glycol Monobutyl Ether: Causes serious eye irritation.

Lauramine oxide: Causes serious eye damage.

**Skin Corrosion/Irritation**

Lauramine oxide: Causes skin irritation.

Dimethyltetradecylamine oxide: Causes skin irritation

**Respiratory or Skin Sensitization**

No relevant studies identified.

**Carcinogenicity**

Not considered carcinogenic by NTP, IARC, and OSHA.

**Germ Cell Mutagenicity**

No relevant studies identified.

**Reproductive Toxicity**

No relevant studies identified.

**Aspiration Hazard**

Not an aspiration hazard.

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**12. ECOLOGICAL INFORMATION**

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**Ecotoxicity**

Sodium octyl sulphate

LC50 Fish, 96h, > 100 mg/l

EC50 Daphnia magna, 48h, > 100 mg/l

ErC50 Algae, 72h, > 500 mg/l

Lauramine oxide

LC50 Fish, 96h, 31.8 mg/l

EC50 Daphnia magna, 48h, 3.9 mg/l

ErC50 Algae, 72h, 0.2 mg/l

Aquatic Chronic - Category 2, Toxic to aquatic life with long lasting effects (ECHA classification)

Sodium tolyltriazole

LC50 Fish, 96h, > 100 mg/l

EC50 Daphnia magna, 48h, > 100 mg/l

ErC50 Algae, 72h, > 500 mg/l

**Mobility in soil**

No relevant studies identified.

**Persistence/Degradability**

This product is expected to be readily biodegradable.

BOD: No relevant studies identified.

COD: No relevant studies identified.

Biodegradation: No relevant studies identified.

**Bioaccumulative Potential**

This product is not expected to bioaccumulate.

**Other adverse effects**

No relevant studies identified.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal Methods**

This product, as sold, is not a RCRA-listed waste or hazardous waste as characterized by 40 CFR 261. However, state and local requirements for waste disposal may be more restrictive or otherwise different from federal 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.

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.

**NOTE:** Please consult Angus Fire for additional information regarding the disposal of foam concentrates and foam solutions.

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**14. TRANSPORT INFORMATION**

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**Shipping Information****Shipping Description**

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

**National Motor Freight Code**

69160 Sub 0

**UN number**

Not regulated for transport

**UN proper shipping name**

Proper Shipping Name (DOT, TDG, IMDG, IATA):

Not applicable

**Transport hazard class(es)**

Transport hazard class(es) (DOT, TDG, IMDG, IATA):

Not applicable

**Packing group**

Packing group (DOT, TDG, IMDG, IATA):

Not applicable

**Environmental hazards**

Other information:

No supplementary information available.

**Special precautions for user**

No data available

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

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.

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**15. REGULATORY INFORMATION**

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**United States TSCA Inventory**

All components of this product are in compliance with the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

**Canada DSL Inventory**

All ingredients in this product have been verified for listing on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL).

**SARA Title III Sect. 311/312 Categorization**

Skin irritation – Serious eye damage

**SARA Title III Sect. 313**

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: Diethylene glycol monobutyl ether

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

Diethylene Glycol Monobutyl Ether (112-34-5) 15% by weight maximum

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**16. OTHER INFORMATION**

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**NFPA Ratings**

NFPA Code for Health - 2

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

**Legend**

ACGIH: American Conference of Governmental Industrial Hygienists

BOD<sub>5</sub>: Biochemical Oxygen Demand (5 day)

CAS#: Chemical Abstracts Service Number

COD: Chemical Oxygen Demand

ECHA: European Chemicals Agency

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

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**16. OTHER INFORMATION**

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**Legend, cont.**

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Revision Date: February 16, 2024

Replaces: November 1, 2023

Changes made: Sections 2, 3, 11, and 14

**Information Source and References**

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

**Prepared By:** National Foam

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