
1. IDENTIFICATION

Product Name	Muni ^{F3} Green Plus 3% Alcohol Resistant Fluorine Free Foam Concentrate
Recommended use of the chemical and restrictions on use	
Identified uses	Firefighting Foam Concentrate
Restrictions on Use	See product data sheet
Company Identification	National Foam, Inc. 350 East Union Street West Chester, PA 19382
Customer Information Number	(610) 363-1400
Emergency Telephone Number	Infotrac at (800) 535-5053
Issue Date	September 26, 2022
Supersedes Date	August 30, 2022
<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

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Causes serious eye irritation.
Causes skin irritation.

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. 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 off contaminated clothing and wash it before reuse.

Storage

None

Disposal

None

2. HAZARD IDENTIFICATION

Other Hazards

None identified.

Specific Concentration Limits

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

Acute oral toxicity 10 - 20%

Acute dermal toxicity 10 - 20%

Acute inhalation toxicity 30 - 40%

Acute aquatic toxicity 0%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Propylene Glycol Monobutyl Ether	5131-66-8	3 - 7%
Sodium Decyl Sulfate	142-87-0	1 - 5%
Sodium Octyl Sulfate	142-31-4	1 - 5%
Sodium laureth sulfate	68891-38-3	1 - 5%
Butanedioic acid, 2-sulfo-, C-isodecyl ester, disodium salt	37294-49-8	0.5 - 1.5%
1-Dodecanol	112-53-8	0.1- 1.0%
1-Tetradecanol	112-72-1	0.1- 1.0%

*Exact concentration withheld as trade secret.

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.

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.

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

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.

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 35°F and 120°F (2°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.

Propylene glycol monobutyl ether

Manufacturer recommended limit: 50ppm TWA

Sodium Decyl Sulfate

None established

Sodium Octyl Sulfate

None established

Sodium laureth sulfate

None established

Butanedioic acid, 2-sulfo-, C-isodecyl ester, disodium salt

None established

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

1-Dodecanol

None established

1-Tetradecanol

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 to high vapor concentrations, aerosols or if applied to hot surfaces. 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

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	Light yellow
Odor		Characteristic
Odor Threshold		No data available
pH		7 - 8
Relative Density		1 - 1.04
Boiling Range/Point (°C/F)		No data available
Melting Point (°C/F)		-6°C/21.2°F
Flash Point (°C/F)		>100°C/212°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
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 – alkali metals – electrically energized equipment - oxidizing agents

Hazardous Decomposition Products

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

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Propylene Glycol Monobutyl Ether

LD50 (Rat, male and female) 3,300 mg/kg

LD50 (Rat, male and female) > 2,000 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

Propylene Glycol Monobutyl Ether: Causes eye irritation.

Sodium decyl sulfate: Risk of serious eye damage ($\geq 20\%$) Causes serious eye irritation ($\geq 10 - < 20\%$).

Sodium octyl sulfate: Risk of serious eye damage ($\geq 20\%$) Causes serious eye irritation ($\geq 10 - < 20\%$).

Sodium laureth sulfate: Causes serious eye damage ($\geq 10\%$). Causes serious eye irritation ($\geq 5 - < 10\%$).

Butanedioic acid, 2-sulfo-, C-isodecyl ester, disodium salt: Causes serious eye damage.

Skin Corrosion/Irritation

Propylene Glycol Monobutyl Ether: Causes skin irritation.

Sodium decyl sulfate: Causes skin irritation in animal testing.

Sodium octyl sulfate: Causes skin irritation in animal testing.

Sodium laureth sulfate: Causes skin irritation.

Respiratory or Skin Sensitization

No relevant studies identified.

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

11. TOXICOLOGICAL INFORMATION

Germ Cell Mutagenicity

No relevant studies identified.

Reproductive Toxicity

No relevant studies identified.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Zebra Fish: Toxicity >100 mg/l

EC50 daphnia magna 139 mg/l 24 hr

EC50 daphnia magna 100 mg/l 48 hr

ErC50 Algae 348 mg/l 72 hr

ErC20 Algae 238 mg/l 72 hr

NOEC Algae 100 mg/l 72hr

Mobility in soil

No relevant studies identified.

Persistence/Degradability

This product is readily biodegradable. (OECD 301A)

Concentrate:

BOD₅: 67,500 mgO₂/L

COD: 449,900 mgO₂/L

Bioaccumulative Potential

This product is not expected to bioaccumulate.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

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.

13. DISPOSAL CONSIDERATIONS

NOTE: Please consult National Foam for additional information regarding the disposal of foam concentrates and foam solutions.

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

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

Eye Irritation – Skin Irritation

SARA Title III Sect. 313

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: None

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

None

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 2

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

16. OTHER INFORMATION

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

BOD₅: Biochemical Oxygen Demand (5 day)

CAS#: Chemical Abstracts Service Number

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

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Revision Date: September 26, 2022

Replaces: August 30, 2022

Changes made: Update to section 15

Information Source and References

This SDS is prepared by National Foam based on information provided by supplier references.

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