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**1. IDENTIFICATION**

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<b>Product Name</b>	High Expansion® 1-1/2% High Expansion 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 Section 15
<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>	July 17, 2019
<b>Supersedes Date</b>	October 22, 2018
<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**

Eye Damage/Irritation - Category 1

Skin Corrosion/Irritation - Category 2

Acute Hazards to the Aquatic Environment - Category 2 (OSHA non-mandatory)

**Label Elements**

Hazard Symbols



Signal Word: Danger

**Hazard Statements**

Causes serious eye damage.

Causes skin irritation.

Toxic to aquatic life.

**Precautionary Statements****Prevention**

Wash hands thoroughly after handling.

Wear protective gloves, eye protection and face protection.

Avoid release to the environment.

**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.

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**

Dispose of contents/container in accordance with local regulation.

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**2. HAZARD IDENTIFICATION**

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**Other Hazards**

None identified.

**Specific Concentration Limits**

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

Acute oral toxicity	20 - 30%
Acute dermal toxicity	20 - 30%
Acute inhalation toxicity	20 - 30%
Acute aquatic toxicity	50 - 60%

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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>
2-Butoxyethanol	111-76-2	15 - 40%
Sodium Alkyl Ether Sulfate	68585-34-2	10 - 30%
Alcohols	67762-41-8	3 - 7%

\*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 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.

**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.

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**5. FIRE - FIGHTING MEASURES**

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**Specific hazards arising from the chemical**

This product will foam when mixed with water.

**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 large quantities of the material from entering drains or watercourses.

**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.

**2-Butoxyethanol**

ACGIH TLV: 20 ppm(97 mg/m<sup>3</sup>) 8hr TWA

OSHA Z-1 PEL: 50 ppm (240 mg/m<sup>3</sup>), Danger of cutaneous absorption

**Sodium Alkyl Ether Sulfate**

None established

**Alcohols**

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.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Skin Protection**

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>	Pale yellow
<b>Odor</b>		Slight
<b>Odor Threshold</b>		No data available
<b>pH</b>		6.9
<b>Specific Gravity</b>		0.99
<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>		>93.3/200
<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 – burning metals – electrically energized equipment

**Hazardous Decomposition Products**

Oxides of carbon - aldehydes - ketones - organic acids - sulfur oxides - sodium oxides - nitrogen oxides

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**11. TOXICOLOGICAL INFORMATION**

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**Acute Toxicity**2-Butoxyethanol

Oral LD50 rat 615 - 880 mg/kg

Dermal LD50 guinea pig &gt;2000 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**Sodium Alkyl ether sulfate: Causes serious eye damage. (70% solution)2-butoxyethanol: Irritating to eyes in rabbit studies.**Skin Corrosion/Irritation**Sodium Alkyl ether sulfate: Causes skin irritation.2-butoxyethanol: Irritating to skin in rabbit studies.**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**Alcohols

LC50 fathead minnow 1.01 mg/l 96hr (based on similar substance)

EC50 daphnia magna 0.7665 mg/l 48 hr (based on similar substance)

EC50 green algae 0.66 mg/l 75hr (based on similar substance)

**Mobility in soil**

No relevant studies identified.

**Persistence/Degradability**Concentrate:BOD<sub>5</sub>: 722,000 mg/l

COD: 1,320,000 mg/l

**Bioaccumulative Potential**

No relevant studies identified.

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**12. ECOLOGICAL INFORMATION**

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**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 National Foam 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****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.

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**15. REGULATORY INFORMATION**

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**United States TSCA Inventory**

All components of this product are in compliance or are exempt from 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**

Serious eye damage – 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: 2- Butoxyethanol

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**15. REGULATORY INFORMATION**

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

**California Proposition 65**

**WARNING:** This product can expose you to chemicals including 1,4 dioxane and ethylene oxide, which are known to the State of California to cause cancer, and ethylene oxide which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).”

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**16. OTHER INFORMATION**

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**NFPA Ratings**

NFPA Code for Health - 3  
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  
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: July 17, 2019  
Replaces: October 22, 2018  
Changes made: Updates to Sections 8 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.

High Expansion is a trademark of Angus International.

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**16. OTHER INFORMATION**

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The information and recommendations presented in this SDS are based on sources believed to be accurate. National Foam assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

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