
1. IDENTIFICATION

Product Name	HI-EX 2% High Expansion 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	July 17, 2019
Supersedes Date	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>	

2. HAZARD IDENTIFICATION

Hazard Classification

Eye Damage/Irritation - Category 1
Skin Corrosion/Irritation - Category 2
Specific Target Organ Toxicity – Repeat Exposure - Category 2
Flammable Liquids - Category 4
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.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.
Combustible liquid.
Toxic to aquatic life.

Precautionary Statements**Prevention**

Wash hands thoroughly after handling.
Wear protective gloves, eye protection and face protection.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Keep away from flames and hot surfaces. No smoking.
Avoid release to the environment.

2. HAZARD IDENTIFICATION

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.

In case of fire: Use extinguishing measures that are appropriate to local circumstances.

Get medical advice/ attention if you feel unwell.

Storage

Store in a well-ventilated place.

Keep cool.

Disposal

Dispose of contents/container in accordance with local regulations.

Other Hazards

None identified.

Specific Concentration Limits

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

Acute oral toxicity	15 - 25%
Acute dermal toxicity	20 - 30%
Acute inhalation toxicity	45 - 55
Acute aquatic toxicity	40 - 50%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Propylene glycol n-Propyl Ether	1569-01-3	10 - 30%
Sodium Alkyl Ether Sulfate	68585-34-2	10 - 30%
Sodium decyl sulfate	142-87-0	5 - 10%
Alcohols	67762-41-8	3 - 7%
D-Glucopyranose, oligomers, decyl octyl glycosides	68515-73-1	1 - 5%
D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	110615-47-9	1 - 5%
Tetrasodium ethylenediaminetetraacetate tetrahydrate	13235-36-4	1 - 5%

*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 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.

4. FIRST-AID MEASURES

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

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Eliminate all sources of ignition. Use non-sparking tools for flammable materials. 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.

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). Store away from sources of heat or ignition. Storage area should be: cool - dry - well ventilated - away from incompatible materials - out of direct sunlight - away from sources of ignition (heat, sparks, flames, and pilot lights)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Propylene glycol n-Propyl Ether

Manufacturers Recommended Limit: 50ppm TWA, 75ppm STEL

Sodium Alkyl Ether Sulfate

None established

Sodium decyl sulfate

None established

Alcohols

None established

D-Glucopyranose, oligomers, decyl octyl glycosides

None established

D-Glucopyranose, oligomeric, C10-16-alkyl glycosides

None established

Tetrasodium ethylenediaminetetraacetate tetrahydrate

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	Colorless
Odor		Slight
Odor Threshold		No data available
pH		7.2
Specific Gravity		1.02
Boiling Range/Point (°C/F)		No data available
Melting Point (°C/F)		No data available
Flash Point (°C/F)		65.5/150
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

9. PHYSICAL AND CHEMICAL PROPERTIES

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 – burning metals – electrically energized equipment

Hazardous Decomposition Products

Oxides of carbon – sulfur oxides – sodium oxides – alkyl mercaptans - sulfides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Propylene glycol n-Propyl Ether

Oral LD50 rat 2800 - 3000 mg/kg

Dermal LD50 rabbit 3550 mg/kg

Tetrasodium ethylenediaminetetraacetate tetrahydrate

Oral LD50 rat, female 1780 mg/kg

Dermal LD50 rabbit >5000 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure

No relevant studies identified.

Specific Target Organ Toxicity (STOT) – repeat exposure

Tetrasodium ethylenediaminetetraacetate tetrahydrate: In animals, effects have been reported on the respiratory tract (Similar chemical)

Serious Eye damage/Irritation

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

Tetrasodium ethylenediaminetetraacetate tetrahydrate: Irritating to eyes in rabbit study.

Sodium Alkyl ether sulfate: Causes serious eye damage. (70% solution)

Propylene glycol n-Propyl Ether: Causes serious eye irritation.

D-Glucopyranose, oligomers, decyl octyl glycosides: Risk of serious damage to eyes.

D-Glucopyranose, oligomeric, C10-16-alkyl glycosides: Risk of serious damage to eyes.

11. TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation

Sodium Alkyl ether sulfate: Causes skin irritation.

Sodium decyl sulfate: Causes skin irritation.

Respiratory or Skin Sensitization

Available data indicates this product is not expected to cause skin sensitization.

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.

12. ECOLOGICAL INFORMATION

EcotoxicityAlcohol

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/DegradabilityConcentrate:

BOD₅: 535,000 mg/l

COD: 1,370,000 mg/l

2% Solution

BOD₅: 9050 mg/l

COD: 24, 200 mg/l

Bioaccumulative Potential

No relevant studies identified.

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.

13. DISPOSAL CONSIDERATIONS

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.

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 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 – Specific Target Organ Toxicity (Repeated Exposure) - Flammable

SARA Title III Sect. 313

This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

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

None

California Proposition 65

WARNING: This product can expose you to chemicals including formaldehyde, 1,4 dioxane and ethylene oxide, which are known to the State of California to cause cancer, and ethylene oxide and methanol, 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.”

16. OTHER INFORMATION

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

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

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: Update to Section 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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