



DATA SHEET #NFC970

NF-3000 Foam & Wetting Agent Concentrate

Description

Environmentally responsible **NF-3000** Wetting Agent concentrate, is a unique new formulation providing unmatched wetting performance, foamability and flexibility. NF-3000 is specially designed for use in industrial and remedial wetting applications. NF-3000 can be used through conventional foam making devices, Class A/B foam systems and is excellent for Compressed Air Foam Systems (CAFS). **This environmentally responsible formulation does not contain reportable components under SARA Title III, Section 313 of 40 CFR-372, or CERCLA.**

NF-3000 improves the penetrating capability of water. It reduces the surface tension of water, which allows it to penetrate surfaces where water might normally run off. Foaming and wetting ingredients give water the ability to adhere to vertical surfaces that allows longer contact with the material to be penetrated. The longer the water is in contact with an absorbent material, the more water is absorbed.

Features

- Environmentally responsible formulation.
- Excellent Wetting and Foaming for dust control and containment.
- Excellent for wetting materials which may contain hazardous dusts and particles such as asbestos.
- Premix is stable for more than 30 days (using potable water), which is significantly longer than traditional Class A foam solutions.
- Contains NO alcohols for higher flash point and compatibility with Class A/B Systems.
- Can be used with fresh, brackish and sea water.
- Exhibits good foamability, even in cold water.
- Can be used as a Class A firefighting foam concentrate.

Typical Physical Properties

Appearance Pale yellow liquid
 Specific Gravity @ 77°F (25°C) 1.05
 pH 9.0
 Minimum Usable Concentrate Temp. 20°F(-7°C)
 Maximum Usable ConcentrateTemp. 120°F(49°C)
 Freezing Point. 6°F(-14°C)
 Viscosity @ 70°F (21°C) 20 csk
 Viscosity @ 20°F (-7°C) 32 csk
 Surface Tension at 0.1% Conc. 25.7 Dynes/cm
 Surface Tension at 0.5% Conc. 24.1 Dynes/cm
 Flash Point: Pensky Martens
 Closed Cup Method >205°F
 Freeze/Thaw: No Effects on Concentrate Properties

Typical Proportioning Settings

Wetting 0.3% - 1.0%
 Foaming, Aspirated 0.7% - 1.0%
 Compressed Air Application 0.1% - 0.5%

Standards & Approvals

- NFPA 18

Compatibility

It is recommended that NF-3000 not be mixed with any other type of foam concentrate in long-term storage. Such mixing could lead to chemical changes in the product and a possible reduction in or loss of its capability.

Storage and Handling

The recommended storage temperature range for NF-3000 concentrate is 20°F (-7°C) to 120°F (49°C). NF-3000 foam concentrate is not affected by freeze/thaw cycles, and it has unique premix stability properties. Samples of NF-3000, premixed with potable municipal water supplies, have been shown to be stable and not suffer any significant loss of expansion or drainage properties after 30 days. Actual results may vary based on the water supply.

NF-3000 should be stored in its original shipping container or in tanks or other containers that have been designed

for such foam storage. Recommended construction materials are stainless steel (Type 304L or 316), high-density cross-linked polyethylene, or reinforced fiberglass polyester (isophthalic polyester resin) with a vinyl ester resin internal layer coating (50 -100 mils).

Foam concentrates are subject to evaporation which accelerates when the product is exposed to air. Storage tanks should be sealed and fitted with a pressure vacuum vent to prevent free exchange of air.

Shelf Life, Inspection, and Testing

The shelf life of any foam concentrate is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature changes, extreme high or low temperatures, evaporation, dilution, and contamination by foreign materials. The expected shelf life of NF-3000 foam concentrate is 20 years or more, if stored properly, according to the manufacturer's recommendations. Should the concentrate become contaminated, testing to ensure original foam concentrate physical properties is a service available from National Foam. Annual testing of foam concentrates is recommended to ensure reliability.

Environmental and Toxicological Information

NF-3000 is biodegradable. However, as with any substance, care should be taken to prevent discharge from entering ground water, surface water, or storm drains. With

advance notice, NF-3000 foam concentrate or foam solution can be treated by local biological sewage treatment systems. Since facilities vary widely by location, advance notice should be given, and disposal should be made in accordance with federal, state, and local regulations.

The biological oxygen demand (BOD) and chemical oxygen demand (COD) of NF-3000 are as follows:

	Concentrate	0.5% Sol.	1% Sol.
BOD ₅	389,000 mg/kg	2,140 mg/kg	4,220 mg/kg
COD	782,000 mg/kg	3,900 mg/kg	7,960 mg/kg

Tests for acute oral toxicity have proved negative. NF-3000 concentrate is a primary skin irritant. Repeated skin contact will remove oils from the skin and cause dryness. NF-3000 is classified as a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective eyewear. If the foam concentrate enters the eyes, flush them well with water and seek immediate medical attention. For further details see the NF-3000 Material Safety Data Sheet.

This product does NOT contain reportable components under SARA Title III, Section 313 of 40 CFR-372 or CERCLA

Ordering Information

Capacity	Description	Part Number	Shipping Weight		Approximate Shipping	
			lbs.	(kg)	Cube Ft ³	(m ³)
5-Gallon (19 litres)	Pails (Round)	2170-9340-6	46	(20.9)	1.13	(0.029)
55-Gallon (208 litres)	Drums	2170-9481-6	503	(228.0)	11.10	(0.326)
275-Gallon (1041 litres)	IBC Reusable Tote Tank	2170-9725-6	2549	(1156.0)	48.20	(1.061)
Per Gallon	Bulk Delivery	2170-9001-6	8.75	(4.0)		

This information is only a general guideline. The company reserves the right to change any portion of this information without notice. Terms and conditions of sale apply and are available on request.

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NATIONAL FOAM, INC.

P.O. Box 695 • Exton, PA 19341-0695 • (610) 363-1400 • Fax: (610) 524-9073
www.Kidde-Fire.com



MATERIAL SAFETY DATA SHEET #NMS970

NF-3000

Synthetic Foam

Section 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Product: NF-3000

Synonyms: Synthetic Detergent, Wetting Agent

CAS No: Mixture - No single CAS # applicable

Company Identification

Manufacturer:

National Foam, Inc.

150 Gordon Drive

P.O. Box 695

Exton, PA 19341-0695

Emergency Phone Number (Red Alert): (610) 363-1400 (U.S.A.)

Fax (610) 524-9073

<http://www.kidde-fire.com/nf1.shtml>

Section 2. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS Number
Water	7732-18-5
Proprietary mixture of synthetic detergents	No single CAS # applicable
1, 2 Propanediol	57-55-6
(2-Methoxymethylethoxy) Propanol	34590-94-8
Proprietary mixture of corrosion inhibitors	No single CAS # applicable

Section 3. HAZARDS IDENTIFICATION

Potential Health Effects

Inhalation

Vapors are minimal at room temperature. If product is heated or sprayed as an aerosol, airborne material may cause respiratory irritation.

Skin Contact

Contact with liquid may cause moderate irritation or dermatitis due to removal of oils from the skin.

Eye Contact

Product is an eye irritant.

Ingestion

Not a hazard in normal industrial use. Small amounts swallowed during normal handling operations are not likely to cause injury; swallowing large amounts may cause injury or irritation.

Additional Health Effects

Existing eye or skin sensitivity may be aggravated by exposure.

Carcinogenicity Information

No data available.

Section 4. FIRST AID MEASURES

Inhalation

No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of airborne aerosol mists, remove to fresh air. Seek medical attention if effects occur.

Skin Contact

In case of skin contact, wash off in flowing water or shower. Launder clothing before reuse.

Eye Contact

In case of eye contact, flush eyes promptly with water for 15 minutes. Retract eyelids often to ensure thorough rinsing. Consult a physician if irritation persists.

Ingestion

Swallowing less than an ounce is not expected to cause significant harm. For larger amounts, do not induce vomiting. Give milk or water. Never give anything by mouth to an unconscious person. Seek medical attention.

Section 5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point – Not applicable

Fire and Explosion Hazards

Avoid contact with water reactive materials, burning metals and electrically energized equipment.

Extinguishing Media

Product is an extinguishing media. Use media appropriate for surrounding materials.

Special Fire Fighting Instructions

This product will produce foam when mixed with water.

Section 6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (Personnel) sections before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up.

Accidental Release Measures

Concentrate

Stop flow if possible. Use appropriate protective equipment during clean up. For small volume releases, collect spilled concentrate with absorbent material; place in approved container. For large volume releases, contain and collect for use where possible. Flush area with water until it no longer foams. Exercise caution, surfaces may be slippery. Prevent discharge of concentrate to waterways. Disposal should be made in accordance with federal, state and local regulations.

Foam/Foam Solution

See above. Flush with water. Prevent discharge of foam/foam solution to waterways. Do not discharge into biological sewer treatment systems without prior approval. Disposal should be made in accordance with federal, state and local regulations.

Section 7. HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin or clothing. Avoid ingestion or inhalation. Rinse skin and eyes thoroughly in case of contact. Review HAZARDS and FIRST AID sections.

Storage

Recommended storage environment is between 20°F (-7°C) and 120°F (49°C). Store product in original shipping container or tanks designed for product storage.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Special ventilation is not required.

Personal Protective Equipment

Respiratory

Recommended exposure limits (OSHA-PEL and ACGIH-TLV) have not been determined for this material. A qualified health specialist should evaluate the need for respiratory protection.

Protective Clothing

Rubber or PVC gloves recommended.

Eye Protection

Safety glasses, face shield or chemical splash goggles must be worn when possibility exists for eye contact. Contact lenses should not be worn. Eye wash facilities are recommended.

Other Hygienic Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before re-use.

Exposure Guidelines

Exposure Limits

(2-Methoxymethylethoxy) Propanol (34590-94-8)

PEL (OSHA)

100 ppm, 8 hr. TWA Skin

150 ppm, 15 min. STEL Skin

TLV (ACGIH)

100 ppm, 8 hr. TWA Skin

150 ppm, 15 min. STEL Skin

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Melting Point:	Not applicable
Evaporation Rate:	<1 (Butyl Acetate = 1.0)

Solubility in Water:	100%
pH:	8.0
Specific Gravity:	1.05 @ 25°C
Odor:	Bland
Form:	Liquid
Color:	Pale Yellow

Section 10. STABILITY AND REACTIVITY

Chemical Stability

Stable.

Incompatibility, Materials to Avoid

Avoid use of product on burning metals, electrically-energized equipment and contact with water reactive materials.

Polymerization

Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Mammalian Toxicity

	<u>Concentrate</u>	<u>1% Solution</u>
Acute Oral Toxicity – Sprague-Dawley Rats	LD ₅₀ > 5000 mg/kg	LD ₅₀ > 5000 mg/kg
Acute Dermal Toxicity – New Zealand White Rabbits	LD ₅₀ > 2000 mg/kg	LD ₅₀ > 2000 mg/kg
Primary Dermal Irritation – New Zealand White Rabbits	Slightly Irritating (Toxicity Category IV)	Non-Irritating (Toxicity Category IV)
Primary Eye Irritation – Unwashed Eyes New Zealand White Rabbits	Moderately Irritating (Toxicity Category I)	Minimally Irritating (Toxicity Category IV)
Primary Eye Irritation – Washed Eyes New Zealand White Rabbits	Mildly Irritating (Toxicity Category III)	Practically Non- Irritating (Toxicity Category IV)

Section 12. ECOLOGICAL INFORMATION

Ecotoxicological Information Aquatic Toxicity

96 hr. LC₅₀ for Rainbow Trout (*oncorhynchus mykiss*) is reported to be 28 mg/liter.

Environmental Fate

	<u>Concentrate</u>	<u>0.5% Solution</u>	<u>1.0% Solution</u>
BOD ₅	389,000 mg/kg	2,140 mg/kg	4,220 mg/kg
COD	782,000 mg/kg	3,900 mg/kg	7,960 mg/kg

This product meets the criteria for Readily Biodegradable when tested in accordance to EPA OPPTS 835-3110, Section 0, Ready Biodegradability (greater than 60% biodegradation in 28 days).

Section 13. DISPOSAL CONSIDERATIONS

NF-3000, 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

Do not discharge into biological sewer treatment systems without prior approval. Specific concerns are high BOD load and foaming tendency. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

Foam/Foam Solution

NF-3000 solution can be treated by wastewater treatment facilities. Discharge into biological sewer treatment facilities may be done with prior approval. Specific concerns are high BOD load. Dilution will reduce BOD and COD factors proportionately. Low dosage flow rate or antifoaming agents acceptable to the treatment plant may be helpful. Do not flush to waterways. Disposal should be made in accordance with federal, state and local regulations.

NOTE: As a service to our customers, National Foam has approvals in place with disposal facilities throughout the U.S. for waste water treatment and solidification and landfill of our foam liquid concentrates and foam solutions. If required, National Foam, Inc. can also provide information on the disposal of drums used for shipping our concentrates. Please contact National Foam's Risk Management Administrator at (610) 363-1400 for additional information.

Section 14. TRANSPORTATION INFORMATION

Shipping Information

Proper Shipping Name: Fire Extinguisher Charges or Compounds N.O.I., Class 60

National Motor Freight Code: 69160 Sub 0

Hazard Class: None

UN Number: None

Section 15. REGULATORY INFORMATION

U.S. Federal Regulations

Toxic Substances Control Act (TSCA)

All components of this product are listed in the TSCA inventory.

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

Section 302/304

There are no components of this material with known CAS numbers which are on the Extremely Hazardous Substances (EHS) list.

Section 311 & 312

Based on available information, this material contains the following components which are classified as the following health and/or physical hazards according to Section 311 & 312:

(2-Methoxymethylethoxy) Propanol 34590-94-8 (Flammability)

Section 313

This material does not contain any chemical components subject to Section 313 reporting requirements.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

This material does not contain any components subject to the reporting requirements of CERCLA.

OTHER REGULATORY INFORMATION

None.

STATE REGULATIONS

PENNSYLVANIA RIGHT-TO-KNOW HAZARDOUS SUBSTANCES LIST

PA Hazardous Substances present at levels greater than 1%:

1, 2 Propanediol 57-55-6

(2-Methoxymethylethoxy) Propanol 34590-94-8

Section 16. OTHER INFORMATION

NFPA Rating

Health 0

Flammability 0

Reactivity 0

WHMIS Rating

D2B

ADDITIONAL INFORMATION

Revision Summary

3/13/06 New Issue

The information contained herein is furnished without warranty either expressed or implied. This data sheet is not a part of any contract of sale. The information contained herein is believed to be correct or is obtained from sources believed to be generally reliable. However, it is the responsibility of the user of these materials to investigate, understand and comply with federal, state and local guidelines and procedures for safe handling and use of these materials. National Foam, Inc. shall not be liable for any loss or damage arising directly or indirectly from the use of this product and National Foam, Inc. assumes no obligation or liabilities for reliance on the information contained herein or omissions herefrom.

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