MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**Evap Foam No Rinse-Aerosol (4171)**
CAS #	Mixture
Product use	Cleaner
Manufacturer	Nu-Calgon 2008 Altom Court St. Louis, MO 63146 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview

WARNING
Contents under pressure. Containers may explode when heated.
May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system.

Potential short term health effects

Routes of exposure
Eye, Skin contact, Skin absorption, Inhalation, Ingestion.

Eyes
May cause severe irritation or chemical burns.

Skin
As per Policy Issue Sheet Number 60, strongly acidic or alkaline substances with a demonstrated pH of 2 or less or 11.5 or greater, need not be tested for primary dermal irritation, owing to their predictable corrosive properties.
In lieu of skin corrosivity test data on animals, this product is considered corrosive in Canada based on the pH of the product as a whole.

May cause severe irritation or chemical burns. May be absorbed through the skin.

NIOSH - Pocket Guide - Skin Notations

Ethylene glycol monobutyl ether	111-76-2	Potential for dermal absorption

Inhalation
Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Aspiration of material into lungs can cause chemical pneumonitis.

Ingestion
Not a normal route of exposure. May cause stomach distress, nausea or vomiting.

Target organs
Blood. Eyes. Kidney. Liver. Respiratory system. Skin.

Chronic effects
Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms
Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Symptoms may include redness, edema, drying, defatting and cracking of the skin.

OSHA Regulatory Status
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects
See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Butane	106-97-8	1 - 5
Diethylene glycol monoethyl ether	111-90-0	1 - 5
Ethylene glycol monobutyl ether	111-76-2	1 - 5
Propane	74-98-6	1 - 5
Tetrasodium ethylenediamine tetraacetate	64-02-8	1 - 5

4. First Aid Measures

First aid procedures

Eye contact
Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact
Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.

Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
General advice	Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Non-flammable aerosol by flame projection test. Aerosol flame extension: None Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Carbon dioxide. Dry chemical. Foam.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Remove sources of ignition. Although the chance of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, absorb spilled material with a non-flammable absorbent such as sand or vermiculite.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	Keep out of reach of children. Do not store at temperatures above 49 °C (120.2°F). Keep away from heat, open flames or other sources of ignition.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Butane	**ACGIH-TLV** TWA: 1000 ppm **OSHA-PEL** Not established
Diethylene glycol monoethyl ether	**ACGIH-TLV** TWA: 25 ppm **OSHA-PEL** Not established
Ethylene glycol monobutyl ether	**ACGIH-TLV** TWA: 20 ppm **OSHA-PEL** TWA: 50 ppm
Propane	**ACGIH-TLV** TWA: 1000 ppm **OSHA-PEL** TWA: 1000 ppm
Tetrasodium ethylenediamine tetraacetate	**ACGIH-TLV** Not established **OSHA-PEL** TWA: 15 mg/m3

Engineering controls General ventilation normally adequate.

Personal protective equipment

Eye / face protection Wear chemical goggles.

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.
When using do not eat or drink.
Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance Compressed liquefied gas

Color Milky

Form Aerosol

Odor Lemon lime

Odor threshold Not available

Physical state Gas

pH 12.3

Melting point Not available

Freezing point Not available

Boiling point 388.40 - 401.00 °F (198 - 205 °C)

Pour point Not available

Evaporation rate Not available

Flash point Not available

Auto-ignition temperature Not available

Flammability limits in air, lower, % by volume Not available

Flammability limits in air, upper, % by volume	Not available
Vapor pressure	65 Psi @ 70°F
Vapor density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available
Solubility (H2O)	Not available
VOC (Weight %)	Not available
Viscosity	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	This product may react with strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Reacts violently with acids. Do not mix with other chemicals. Aerosol containers are unstable at temperatures above 49°C (120.2°F).
Incompatible materials	Acids. Oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Butane	658 mg/l/4h rat
Diethylene glycol monoethyl ether	5240.0001 mg/l/4h rat
Ethylene glycol monobutyl ether	2.21 mg/l/4h rat
Propane	Not available
Tetrasodium ethylenediamine tetraacetate	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Butane	Not available
Diethylene glycol monoethyl ether	5500 mg/kg rat
Ethylene glycol monobutyl ether	470 mg/kg rat; 320 mg/kg rabbit
Propane	Not available
Tetrasodium ethylenediamine tetraacetate	2000 mg/kg rat

Effects of acute exposure

Eye	May cause severe irritation or chemical burns.
Skin	As per Policy Issue Sheet Number 60, strongly acidic or alkaline substances with a demonstrated pH of 2 or less or 11.5 or greater, need not be tested for primary dermal irritation, owing to their predictable corrosive properties. In lieu of skin corrosivity test data on animals, this product is considered corrosive in Canada based on the pH of the product as a whole. May cause severe irritation or chemical burns. May be absorbed through the skin.

NIOSH - Pocket Guide - Skin Notations

Ethylene glycol monobutyl ether	111-76-2	Potential for dermal absorption

Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness). Aspiration of material into lungs can cause chemical pneumonitis.
Ingestion	Not a normal route of exposure. May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.

Carcinogenicity See below.

ACGIH - Threshold Limit Values - Carcinogens

Ethylene glycol monobutyl ether	111-76-2	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC - Group 3 (Not Classifiable)

Ethylene glycol monobutyl ether	111-76-2	Monograph 88 [2006]

Mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity Non-hazardous by WHMIS/OSHA criteria.

Name of Toxicologically Synergistic Products Not available

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae - Acute Toxicity Data

Tetrasodium ethylenediamine tetraacetate	64-02-8	72 Hr EC50 Desmodesmus subspicatus: 1.01 mg/L

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Diethylene glycol monoethyl ether	111-90-0	96 Hr LC50 Oncorhynchus mykiss: 11400-15700 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11600-16700 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 10000 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 19100-23900 mg/L [flow-through]; 96 Hr LC50 Salmo gairdneri: 13400 mg/L [flow-through]
Ethylene glycol monobutyl ether	111-76-2	96 Hr LC50 Lepomis macrochirus: 1490 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 2950 mg/L
Tetrasodium ethylenediamine tetraacetate	64-02-8	96 Hr LC50 Lepomis macrochirus: 41 mg/L [static]; 96 Hr LC50 Pimephales promelas: 59.8 mg/L [static]

Ecotoxicity - Water Flea - Acute Toxicity Data

Diethylene glycol monoethyl ether	111-90-0	48 Hr EC50 Daphnia magna: 3940 - 4670 mg/L
Ethylene glycol monobutyl ether	111-76-2	24 Hr EC50 Daphnia magna: 1698 - 1940 mg/L; 48 Hr EC50 Daphnia magna: >1000 mg/L
Tetrasodium ethylenediamine tetraacetate	64-02-8	24 Hr EC50 Daphnia magna: 610 mg/L

Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Mobility in environmental media Not available

Environmental effects Not available

Aquatic toxicity Not available

Partition coefficient Not available

Chemical fate information Not available

Other adverse effects Not available

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not available

Contaminated packaging Not available

14. Transport Information

U.S. Department of Transportation (DOT)

CONSUMER COMMODITY ORM-D or LIMITED QUANTITY.

Transportation of Dangerous Goods (TDG - Canada)

CONSUMER COMMODITY or LIMITED QUANTITY

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - CEPA - High Priority Chemicals as Identified by DSL Categorization

Butane	106-97-8	Batch 4, published November 17, 2007

Canada - CEPA - Schedule I - List of Toxic Substances

Ethylene glycol monobutyl ether	111-76-2	Present

Canada - WHMIS - Ingredient Disclosure List

Butane	106-97-8	1 %
Diethylene glycol monoethyl ether	111-90-0	1 %
Ethylene glycol monobutyl ether	111-76-2	1 %

WHMIS status Controlled

WHMIS classification Class A - Compressed Gas, Class E - Corrosive Material

WHMIS labeling

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Flammable Substances

Butane	106-97-8	10000 lb threshold quantity
Propane	74-98-6	10000 lb threshold quantity

U.S. - CAA (Clean Air Act) - HON Rule - SOCMI Chemicals

Diethylene glycol monoethyl ether	111-90-0	Group I
Ethylene glycol monobutyl ether	111-76-2	Group I

U.S. - CAA (Clean Air Act) - Reactivity Factors for VOCs in Aerosol Coatings

Butane	106-97-8	1.33 G Ozone/g VOC Reactivity Factor
Diethylene glycol monoethyl ether	111-90-0	3.19 G Ozone/g VOC Reactivity Factor
Ethylene glycol monobutyl ether	111-76-2	2.90 G Ozone/g VOC Reactivity Factor
Propane	74-98-6	0.56 G Ozone/g VOC Reactivity Factor

U.S. - CAA (Clean Air Act) - SNAP Program Listing of Substitutes for ODSs

Butane	106-97-8	Acceptable substitute for: 6
Propane	74-98-6	Acceptable substitute for: 6, 7

U.S. - CAA (Clean Air Act) - Volatile Organic Compounds (VOCs) in SOCMI

Diethylene glycol monoethyl ether	111-90-0	Present
Ethylene glycol monobutyl ether	111-76-2	Present

CERCLA (Superfund) reportable quantity

Sodium nitrite: 100.0000
Ammonium hydroxide: 1000.0000
Sodium hydroxide: 1000.0000
Formaldehyde: 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - Yes
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Water Act (CWA) Hazardous substance

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Butane	106-97-8	Present
Ethylene glycol monobutyl ether	111-76-2	Present

U.S. - Massachusetts - Right To Know List

Butane	106-97-8	Present
Ethylene glycol monobutyl ether	111-76-2	Present
Propane	74-98-6	Present

U.S. - Minnesota - Hazardous Substance List

Butane	106-97-8	Present
Diethylene glycol monoethyl ether	111-90-0	Present
Ethylene glycol monobutyl ether	111-76-2	Skin
Propane	74-98-6	Simple asphyxiant

U.S. - New Jersey - Right to Know Hazardous Substance List

Butane	106-97-8	sn 0273
Ethylene glycol monobutyl ether	111-76-2	sn 0275
Propane	74-98-6	sn 1594

U.S. - Pennsylvania - RTK (Right to Know) List

Butane	106-97-8	Present
Ethylene glycol monobutyl ether	111-76-2	Present
Propane	74-98-6	Present

U.S. - Rhode Island - Hazardous Substance List

Butane	106-97-8	Toxic; Flammable
Ethylene glycol monobutyl ether	111-76-2	Toxic (skin)
Propane	74-98-6	Toxic; Flammable

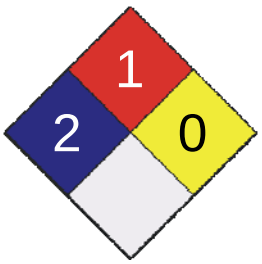
Inventory name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.