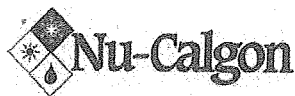


MATERIAL SAFETY DATA SHEET



1. Product and Company Identification

1/29/2013

Product Name Fluorescent Gas Leak Detector (4184)
CAS # Mixture
Product use Gas Leak Detector
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)

FLUORESCENT GAS
LEAK DETECTOR
BY: NU-CALGON

2. Hazards Identification

4184-24 (41840)

Emergency overview DANGER
Toxic.
Contains a potential teratogen.
EYE AND SKIN IRRITANT.

Potential short term health effects

Routes of exposure Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
Eyes Causes irritation.
Skin Causes irritation. May be absorbed through the skin.
Inhalation May cause respiratory tract irritation.
Ingestion This product may be harmful or fatal if swallowed.
May cause stomach distress, nausea or vomiting.
Aspiration of material into lungs can cause chemical pneumonitis.

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

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis. Prolonged or repeated overexposure can cause liver and kidney damage.

Signs and symptoms Although animal toxicity values do not meet criteria, ethylene glycol is toxic to humans. There are numerous human case reports of toxicity and death published in the literature.
Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

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

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

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Ethylene glycol	107-21-1	10 - 30
Lauryldimethylamine oxide	1643-20-5	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.

Ingestion Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

Notes to physician Symptoms may be delayed.

General advice

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	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Carbon dioxide. Dry chemical powder. Foam. Water spray.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
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	Do not discharge into lakes, streams, ponds or public waters.
Methods for containment	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. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits**Ingredient(s)****Exposure Limits**

Ethylene glycol

ACGIH-TLVCeiling: 100 mg/m³**OSHA-PEL**

Not established

Lauryldimethylamine oxide

ACGIH-TLV

Not established

OSHA-PEL

Not established

Engineering controls

Use only under good ventilation conditions or with respiratory protection.

Personal protective equipment**Eye / face protection**

Wear safety glasses with side shields.

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. Avoid breathing mists or vapors.

9. Physical and Chemical Properties

Appearance	Fluorescent
Color	Yellow
Form	Liquid
Odor	Odorless
Odor threshold	Not available
Physical state	Liquid
pH	8.1 - 8.5
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	> 220 °F (> 104.44 °C)
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	Not available
Vapor density	Not available
Specific gravity	Not available
Relative density	8.54 lbs/gallon
Octanol/water coefficient	Not available
Solubility (H ₂ O)	Not available
Viscosity	375 CPs
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	This product may react with strong acids.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Caustics. Acids. Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Acute effects Although animal toxicity values do not meet criteria, ethylene glycol is toxic to humans. There are numerous human case reports of toxicity and death published in the literature.

Component analysis - LC50

Ingredient(s)	LC50
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Ethylene glycol	Not available
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Lauryldimethylamine oxide	Not available
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Component analysis - Oral LD50

Ingredient(s)	LD50
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Ethylene glycol	7500 mg/kg mouse; 6.6 g/kg guinea pig; 5 g/kg rabbit
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Lauryldimethylamine oxide	2700 mg/kg mouse
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Effects of acute exposure

Eye	Causes irritation.
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Skin	Causes irritation. May be absorbed through the skin.
Inhalation	May cause respiratory tract irritation.
Ingestion	This product may be harmful or fatal if swallowed. May cause stomach distress, nausea or vomiting. Aspiration of material into lungs can cause chemical pneumonitis.
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	107-21-1 A4 - Not Classifiable as a Human Carcinogen
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects	Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity	In rats and mice exposed to ethylene glycol, embryotoxic (late resorptions), fetotoxic (reduced fetal body weight) and teratogenic (external, soft tissue and skeletal defects) effects were observed at relatively high oral doses that caused no or minimal maternal toxicity.
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		
Ethylene glycol	107-21-1	96 Hr EC50 Pseudokirchneriella subcapitata: 6500 - 13000 mg/L
Ecotoxicity - Freshwater Fish - Acute Toxicity Data		
Ethylene glycol	107-21-1	96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L; 96 Hr LC50 Oncorhynchus mykiss: 14 - 18 mL/L [static]; 96 Hr LC50 Lepomis macrochirus: 27540 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 40761 mg/L [static]; 96 Hr LC50 Pimephales promelas: 40000 - 60000 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 16000 mg/L [static]
Ecotoxicity - Water Flea - Acute Toxicity Data		
Ethylene glycol	107-21-1	48 Hr EC50 Daphnia magna: 46300 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	Review federal, provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)	
	Not regulated as dangerous goods.
Transportation of Dangerous Goods (TDG - Canada)	
	Not regulated as dangerous goods.

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 - WHMIS - Ingredient Disclosure List

Ethylene glycol	107-21-1	1 %
Lauryldimethylamine oxide	1643-20-5	1 %

WHMIS status

Controlled

WHMIS classification

Class D - Division 1B, 2A, 2B

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. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Ethylene glycol 107-21-1 5000 Lb final RQ; 2270 kg final RQ

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Ethylene glycol 107-21-1 1.0 % de minimis concentration

CERCLA (Superfund) reportable quantity

1,2-Ethanedio: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

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

Ethylene glycol 107-21-1 Present (exempt when vapors or particulates are formed due to work practices or procedures)

U.S. - Illinois - Toxic Air Contaminants

Ethylene glycol 107-21-1 Present

U.S. - Louisiana - Reportable Quantity List for Pollutants

Ethylene glycol 107-21-1 5000 Lb RQ (applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period); 5000 lb RQ (applies to unauthorized emissions based on total mass emitted into the atmosphere)

U.S. - Massachusetts - Right To Know List

Ethylene glycol 107-21-1 Present

U.S. - Minnesota - Hazardous Substance List

Ethylene glycol 107-21-1 Present (particulate and vapor)

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

Ethylene glycol 107-21-1 sn 0878

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Ethylene glycol 107-21-1 1 Lb RQ (air); 1 lb RQ (land/water)

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

Ethylene glycol 107-21-1 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Ethylene glycol 107-21-1 Toxic; Flammable

Inventory name**Country(s) or region**

Canada
 Canada
 United States & Puerto Rico

Inventory name

Domestic Substances List (DSL)
 Non-Domestic Substances List (NDSL)
 Toxic Substances Control Act (TSCA) Inventory

On inventory (yes/no)*

Yes
 No
 Yes

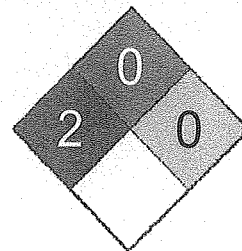
A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

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

Disclaimer**Issue date****Effective date****Expiry date****Prepared by****Other information**

Health	* 2
Flammability	0
Physical Hazard	0
Personal Protection	B



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.

07-Jan-2011

15-Feb-2011

15-Feb-2014

Nu-Calgon Technical Service (314) 469-7000

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