

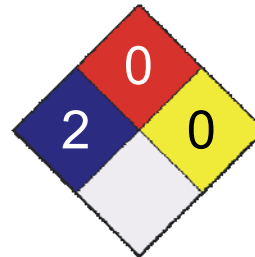
# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product Name** Cal-Blue LT (4183)  
**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)

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

Health	* 2
Flammability	0
Physical Hazard	0
Personal Protection	X



## 2. Hazards Identification

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

**Potential short term health effects**

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

**Eyes** May cause irritation.

**Skin** May cause irritation.

**Inhalation** May cause respiratory tract irritation.

**Ingestion** May cause stomach distress, nausea or vomiting.

**Target organs** Skin. Eyes.

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

**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.

## 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Ethylene glycol	107-21-1	30 - 60
Lauryldimethylamine oxide	1643-20-5	1 - 5
Triethanolamine	102-71-6	0.5 - 1.5

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

**Skin contact** Flush with cool 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.

<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Notes to physician</b>	Symptoms may be delayed.
<b>General advice</b>	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

<b>Flammable properties</b>	Not flammable by WHMIS/OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Foam. Carbon dioxide.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

## 6. Accidental Release Measures

<b>Personal precautions</b>	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.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	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

<b>Handling</b>	Use good industrial hygiene practices in handling this material.
<b>Storage</b>	Keep out of reach of children. Store in a closed container away from incompatible materials.

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## 8. Exposure Controls / Personal Protection

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### Exposure limits

Ingredient(s)	Exposure Limits
Ethylene glycol	<b>ACGIH-TLV</b> Ceiling: 100 mg/m <sup>3</sup> <b>OSHA-PEL</b> Not established
Lauryldimethylamine oxide	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established
Triethanolamine	<b>ACGIH-TLV</b> TWA: 5 mg/m <sup>3</sup> <b>OSHA-PEL</b> Not established

### Engineering controls

General ventilation normally adequate.

### 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.

#### 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.

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## 9. Physical and Chemical Properties

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Appearance	Clear.
Color	Blue
Form	Liquid
Odor	Characteristic
Odor threshold	Not available
Physical state	Liquid
pH	8.1 - 8.5 (Concentrate)
Melting point	Not available
Freezing point	Not available
Boiling point	100 °C (212.00 °F) Not available
Flash point	Not available
Evaporation rate	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
Octanol/water coefficient	Not available
Solubility (H <sub>2</sub> O)	Complete
Auto-ignition temperature	Not available
VOC (Weight %)	Not available
Viscosity	375 cPs
Bulk density	8.82 lbs/gallon

## 10. Stability and Reactivity

<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Oxidizers. Acids.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 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
Ethylene glycol	Not available
Lauryldimethylamine oxide N	ot available
Triethanolamine	Not available

### Component analysis - Oral LD50

Ingredient(s)	LD50
Ethylene glycol	7500 mg/kg mouse; 6.6 g/kg guinea pig; 5 g/kg rabbit; 4000 mg/kg rat
Lauryldimethylamine oxide 2	700 mg/kg mouse
Triethanolamine	4190 mg/kg rat; 5300 mg/kg guinea pig; 5200 mg/kg mouse

### Effects of acute exposure

<b>Eye</b>	May cause irritation.
<b>Skin</b>	May cause irritation.
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Ingestion</b>	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 107-21-1 A4 - Not Classifiable as a Human Carcinogen

#### IARC - Group 3 (Not Classifiable)

Triethanolamine 102 -71-6 Monograph 77 [2000]

**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.

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## 12. Ecological Information

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

### Ecotoxicity - Freshwater Algae Data

Ethylene glycol	107-21-1	96 Hr EC50 Selenastrum capricornutum: 6500 - 13000 mg/L
Triethanolamine	102-71-6	72 Hr EC50 Scenedesmus subspicatus: 216 mg/L; 96 Hr EC50 Scenedesmus subspicatus: 169 mg/L

### Ecotoxicity - Freshwater Fish Species Data

Ethylene glycol	107-21-1	96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L; 96 Hr LC50 Oncorhynchus mykiss:40761 mg/L[ static ]; 96 Hr LC50 Poecilia reticulata:16000 mg/L[ static ]
Triethanolamine	102-71-6	96 Hr LC50 Pimephales promelas: >1000 mg/L [static]; 96 Hr LC50 Lepomis macrochirus:450-1000 mg/L[ static ]

### Ecotoxicity - Microtox Data

Ethylene glycol	107-21-1	30 Min EC50 Photobacterium phosphoreum: 620.0 mg/L; 30 min EC50 Photobacterium phosphoreum: 620 mg/L; 16 Hr EC50 Pseudomonas putida: 10000 mg/L
Triethanolamine	102-71-6	30 Min EC50 Pseudomonas putida: >10000 mg/L

### Ecotoxicity - Water Flea Data

Ethylene glycol	107-21-1	48 Hr EC50 water flea: 46300 mg/L
Triethanolamine	102-71-6	24 Hr EC50 Daphnia magna: 1386 mg/L

<b>Environmental effects</b>	Not available
<b>Aquatic toxicity</b>	Not available
<b>Persistence / degradability</b>	Not available
<b>Bioaccumulation / accumulation</b>	Not available
<b>Partition coefficient</b>	Not available
<b>Mobility in environmental media</b>	Not available
<b>Chemical fate information</b>	Not available
<b>Other adverse effects</b>	Not available

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## 13. Disposal Considerations

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<b>Waste codes</b>	Not available
<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

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## 14. Transport Information

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### U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

### Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

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## 15. Regulatory Information

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**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 164	3-20-5	1 %
Triethanolamine 102	-71-6	1 %

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

Ethylene glycol	107-21-1	1.0 % de minimis concentration
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### Occupational Safety and Health Administration (OSHA)

<b>29 CFR 1910.1200 hazardous chemical</b>	Yes
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**CERCLA (Superfund) reportable quantity**

1,2-Ethanediol: 5000.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
<b>Section 302 extremely hazardous substance</b>	No
<b>Section 311 hazardous chemical</b>	Yes
<b>Clean Air Act (CAA)</b>	Not available
<b>Clean Water Act (CWA)</b>	Not available
<b>WHMIS status</b>	Controlled
<b>WHMIS classification</b>	Class D - Division 1B, 2A, 2B
<b>WHMIS labeling</b>	



**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)
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**U.S. - Illinois - Toxic Air Contaminants**

Ethylene glycol	107-21-1	Present
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**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)
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**U.S. - Massachusetts - Right To Know List**

Ethylene glycol	107-21-1	Present
Triethanolamine	102-71-6	Present

**U.S. - Minnesota - Hazardous Substance List**

Ethylene glycol	107-21-1	Present (particulate and vapor)
Triethanolamine	102-71-6	Present

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

Ethylene glycol	107-21-1	sn 0878
Triethanolamine	102-71-6	sn 4094

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

Ethylene glycol	107-21-1	Environmental hazard
Triethanolamine	102-71-6	Present

**U.S. - Rhode Island - Hazardous Substance List**

Ethylene glycol	107-21-1	Toxic; Flammable
Triethanolamine	102-71-6	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)

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## 16. Other Information

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<b>Disclaimer</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.
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<b>Prepared by</b>	Nu-Calgon Technical Service (314) 469-7000