

# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product identifier</b>	<b>Aerosol Nu-Brite (4291-18)</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Cleaner/Degreaser
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	Nu-Calgon
<b>Address</b>	2008 Altom Court St. Louis, MO 63146 United States
<b>Telephone</b>	314-469-7000 / 800-554-5499
<b>E-mail</b>	info@nu calgon.com
<b>Emergency phone number</b>	1-800-424-9300 (CHEMTREC)

## 2. Hazards Identification

<b>Physical hazards</b>	Flammable aerosols	Category 2
	Gases under pressure	Liquefied gas
	Corrosive to metals	Category 1
<b>Health hazards</b>	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**



**Signal word** Danger

**Hazard statement**  
 Flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 May be corrosive to metals.  
 Causes severe skin burns and eye damage.

**Precautionary statement**

**Prevention**  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Keep only in original container. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**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/doctor.  
 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing. Specific treatment (see this label).  
 Absorb spillage to prevent material damage.

**Storage**  
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.  
 Store locked up.  
 Store in corrosive resistant container with a resistant inner liner.

**Disposal**  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** Not applicable.

### 3. Composition/Information on Ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium hydroxide		1310-73-2	9.5
Butane		106-97-8	2.95
Propane		74-98-6	2.05
Monoethanolamine		141-43-5	1.9

### 4. First Aid Measures

<b>Inhalation</b>	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor/.
<b>Skin contact</b>	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
<b>Eye contact</b>	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/doctor.
<b>Ingestion</b>	If swallowed: Rinse mouth. Do NOT induce vomiting.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire Fighting Measures

<b>Suitable extinguishing media</b>	Dry chemical. Carbon dioxide. Fog.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
<b>General fire hazards</b>	Flammable aerosol.

### 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Dike far ahead of spill for later disposal. Absorb spillage to prevent material damage. Scoop up used absorbent into drums or other appropriate container. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and Storage

<b>Precautions for safe handling</b>	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Contents under pressure. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep away from heat, sparks and open flame. Avoid exposure to long periods of sunlight. Store in corrosive resistant container with a resistant inner liner. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Monoethanolamine (CAS 141-43-5)	PEL	6 mg/m <sup>3</sup>
		3 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m <sup>3</sup>
		1000 ppm
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Monoethanolamine (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m <sup>3</sup>
		800 ppm
Monoethanolamine (CAS 141-43-5)	STEL	15 mg/m <sup>3</sup>
		6 ppm
	TWA	8 mg/m <sup>3</sup>
Propane (CAS 74-98-6)	TWA	3 ppm
		1800 mg/m <sup>3</sup>
		1000 ppm
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m <sup>3</sup>

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Chemical goggles are recommended.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing.
<b>Respiratory protection</b>	Wear positive pressure self-contained breathing apparatus (SCBA). In case of insufficient ventilation, wear suitable respiratory equipment.

<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

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## 9. Physical and Chemical Properties

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<b>Appearance</b>	Compressed liquefied gas.
<b>Physical state</b>	Gas.
<b>Form</b>	Aerosol. Spray
<b>Color</b>	Clear Green
<b>Odor</b>	Caustic
<b>Odor threshold</b>	Not available.
<b>pH</b>	13.0 ± 0.5
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Pour point</b>	Not available.
<b>Specific gravity</b>	Not available
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	Not available
<b>Evaporation rate</b>	< 1 (Ether = 1)
<b>Flammability (solid, gases)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available
<b>Flammability limit - upper (%)</b>	Not available
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	481 kPa
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Heat of combustion</b>	3.23 kJ/g

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## 10. Stability and Reactivity

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<b>Reactivity</b>	Strong acids.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Strong oxidizing agents. Acids. Reducing agents. Soft metals.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

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## 11. Toxicological Information

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### Information on likely routes of exposure

<b>Ingestion</b>	Causes digestive tract burns.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.

**Symptoms related to the physical, chemical and toxicological characteristics**

Burning pain and severe corrosive skin damage. Causes serious eye damage. Permanent eye damage including blindness could result. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Information on toxicological effects****Acute toxicity****Components****Species****Test Results**

Butane (CAS 106-97-8)

**Acute***Dermal*

LD50

Not available

*Inhalation*

LC50

Mouse

680 mg/l, 2 Hours

Rat

276000 ppm, 4 Hours

658 mg/l/4h

*Oral*

LD50

Not available

Monoethanolamine (CAS 141-43-5)

**Acute***Dermal*

LD50

Rabbit

1018 mg/kg

1000 mg/kg

*Inhalation*

LC50

Mouse

1210 mg/m<sup>3</sup>, 4 Hours

484 ppm, 4 Hours

1.2 mg/l, 4 Hours

*Oral*

LD50

Guinea pig

620 mg/kg

Mouse

1475 mg/kg

700 mg/kg

Rat

1970 mg/kg

1720 mg/kg

Propane (CAS 74-98-6)

**Acute***Dermal*

LD50

Not available

*Inhalation*

LC50

Rat

&gt; 1442.8 mg/l, 15 Minutes

*Oral*

LD50

Not available

Sodium hydroxide (CAS 1310-73-2)

**Acute***Dermal*

LD50

Rabbit

1350 mg/kg

*Inhalation*

LC50

Not available

*Oral*

LD50

Not available

**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Exposure minutes**

Not available.

**Erythema value**

Not available.

**Oedema value**

Not available.

**Serious eye damage/eye irritation**

Causes serious eye damage.

<b>Corneal opacity value</b>	Not available.
<b>Iris lesion value</b>	Not available.
<b>Conjunctival reddening value</b>	Not available.
<b>Conjunctival oedema value</b>	Not available.
<b>Recover days</b>	Not available.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, NTP, or OSHA.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
	Not listed.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not likely, due to the form of the product.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. May be harmful if absorbed through skin.
<b>Further information</b>	Not available.

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## 12. Ecological Information

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<b>Ecotoxicity</b>	See below		
<b>Components</b>		<b>Species</b>	<b>Test Results</b>
Monoethanolamine (CAS 141-43-5)			
Algae	IC50	Algae	15 mg/L, 72 Hours
Crustacea	EC50	Daphnia	65 mg/L, 48 Hours
<b>Aquatic</b>			
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	114 - 196 mg/l, 96 hours
Sodium hydroxide (CAS 1310-73-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	125 mg/l, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Partition coefficient n-octanol / water (log Kow)</b>			
Butane 2.		89	
Monoethanolamine -1		.31	
Propane 2.		36	
<b>Mobility in soil</b>	No data available.		
<b>Mobility in general</b>	Not available.		
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

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## 13. Disposal Considerations

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<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

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## 14. Transport Information

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

**Basic shipping requirements:**

UN number	UN1950
Proper shipping name	Aerosols, corrosive, Packing Group II or III
Hazard class	Limited Quantity - US
Special provisions	A34
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

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

**Basic shipping requirements:**

UN number	UN1950
Proper shipping name	AEROSOLS, non-flammable, containing substances in Class 8, packing group II
Hazard class	Limited Quantity - Canada
Special provisions	80

### IATA/ICAO (Air)

**Basic shipping requirements:**

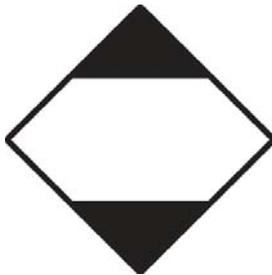
UN number	UN1950
Proper shipping name	Aerosols, non-flammable, containing substances in Class 8, Packing Group II
Hazard class	2.2
Subsidiary hazard class	8
ERG code	2C

### IMDG (Marine Transport)

**Basic shipping requirements:**

UN number	UN1950
Proper shipping name	AEROSOLS
Hazard class	Limited Quantity - US

DOT; IMDG; TDG



IATA



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## 15. Regulatory Information

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### US federal regulations

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

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)

Listed.

Propane (CAS 74-98-6) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

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

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

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Butane (CAS 106-97-8)  
Propane (CAS 74-98-6)

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - California Hazardous Substances (Director's): Listed substance**

Butane (CAS 106-97-8) Listed.  
Monoethanolamine (CAS 141-43-5) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US - Illinois Chemical Safety Act: Listed substance**

Butane (CAS 106-97-8) Listed.  
Propane (CAS 74-98-6) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US - Louisiana Spill Reporting: Listed substance**

Butane (CAS 106-97-8) Listed.  
Propane (CAS 74-98-6) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US - Minnesota Haz Subs: Listed substance**

Butane (CAS 106-97-8) Listed.  
Monoethanolamine (CAS 141-43-5) Listed.  
Propane (CAS 74-98-6) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US - New Jersey RTK - Substances: Listed substance**

Butane (CAS 106-97-8) Listed.  
Monoethanolamine (CAS 141-43-5) Listed.  
Propane (CAS 74-98-6) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US - New York Release Reporting: Hazardous Substances: Listed substance**

Sodium hydroxide (CAS 1310-73-2) Listed.

**US. Massachusetts RTK - Substance List**

Butane (CAS 106-97-8) Listed.  
Monoethanolamine (CAS 141-43-5) Listed.  
Propane (CAS 74-98-6) Listed.  
Sodium hydroxide (CAS 1310-73-2) Listed.

**US. Pennsylvania RTK - Hazardous Substances**

Butane (CAS 106-97-8) Listed.

Monoethanolamine (CAS 141-43-5)  
Propane (CAS 74-98-6)  
Sodium hydroxide (CAS 1310-73-2)

Listed.  
Listed.  
Listed.

**US. Rhode Island RTK**

Butane (CAS 106-97-8)  
Propane (CAS 74-98-6)  
Sodium hydroxide (CAS 1310-73-2)

Listed.  
Listed.  
Listed.

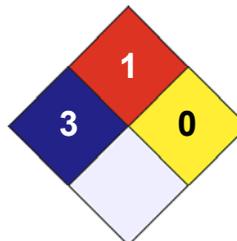
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

**16. Other Information**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



**Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available. 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.

**Issue date**

23-September-2014

**Further information**

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

**Other information**

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Prepared by**

Nu-Calgon Technical Service Phone: (314) 469-7000