

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	Nu-Blast, Aerosol (4290-75)
Other means of identification	Not available
Recommended use	Coil Cleaner/Degreaser
Recommended restrictions	None known.
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

Physical hazards	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1
	Reproductive toxicity	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement
 Contains gas under pressure; may explode if heated.
 Causes skin irritation. May cause an allergic skin reaction.
 Causes serious eye irritation.
 May cause drowsiness or dizziness.
 Suspected of causing genetic defects.
 May cause cancer.
 May damage fertility or the unborn child.

Precautionary statement

Prevention
 Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
 Avoid breathing mist or vapor. Contaminated work clothing must not be allowed out of the workplace.
 Use only outdoors or in a well-ventilated area.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.

Response
 If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Specific treatment (see this label).
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
 If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
 If exposed or concerned: Get medical advice/attention.

Storage
 Protect from sunlight. Store in a well-ventilated place.
 Keep container tightly closed. Store locked up.

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

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

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Ethene, trichloro-		79-01-6	95 - 98
Carbon dioxide		124-38-9	2 - 5
Fragrance		Trade Secret	0.1 - 1

4. First Aid Measures

Inhalation	If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
Skin contact	If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Eye contact	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. Do not induce vomiting. Get medical attention if symptoms occur. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. Wear rubber gloves and chemical splash goggles.

5. Fire Fighting Measures

Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
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, protective equipment and emergency procedures	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. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk.

Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only with adequate ventilation.
 Avoid contact with eyes, skin and clothing. Avoid contact during pregnancy/while nursing.
 Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wear personal protective equipment. When using, do not eat, drink or smoke.
 Wash thoroughly after handling.
 Keep container tightly closed.
 Avoid breathing vapors or mists of this product.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of 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
Carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3
		5000 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Ethene, trichloro- (CAS 79-01-6)	Ceiling	200 ppm
	TWA	100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm
Ethene, trichloro- (CAS 79-01-6)	STEL	25 ppm
	TWA	10 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
		30000 ppm
	TWA	9000 mg/m3 5000 ppm
Ethene, trichloro- (CAS 79-01-6)	TWA	25 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Ethene, trichloro- (CAS 79-01-6)	15 mg/l	Trichloroacetic acid	Urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
	0.5 mg/l	Trichloroethano l, without hydrolysis	Blood	*

* - For sampling details, please see the source document.

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.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear chemical goggles.

Skin protection**Hand protection**

Rubber gloves. Confirm with a reputable supplier first.

Other

Wear appropriate chemical resistant clothing. As required by employer code.

Respiratory protection

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

Thermal hazards

Not applicable.

General hygiene considerations

When using, do not eat, drink or 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. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Gas.
Form	Spray
Color	Colorless
Odor	Solvent
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.46
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	50-85 psig @ 70°F
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 20.5 mm ² /s

Other information

Flame projection	< 18 in
Flammability (flash back)	No
Heat of combustion	6.95 kJ/g

10. Stability and Reactivity

Reactivity	This product may react with oxidizing agents.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents. Soft metals.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Phosgene.

11. Toxicological Information

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

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Rash. Skin irritation. May cause redness and pain. Dermatitis. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity Narcotic effects. May cause an allergic skin reaction.

Components	Species	Test Results
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Carbon dioxide (CAS 124-38-9)

Acute*Inhalation*

LC50	Not available	
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Oral

LD50	Not available	
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Ethene, trichloro- (CAS 79-01-6)

Acute*Dermal*

LD50	Rabbit	20000 mg/kg
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Inhalation

LC50	Mouse	8450 ppm, 4 Hours
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	Rat	8000 mg/l/4h
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LD50	Mouse	49000 ppm, 30 Minutes
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		5500 ppm, 10 Hours
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Oral

LD50	Dog	5680 mg/kg
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	Mouse	2402 mg/kg
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	Rat	4290 mg/kg
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Fragrance (CAS Trade Secret)

Acute*Inhalation*

LC50	Not available	
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Oral

LD50	Not available	
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Skin corrosion/irritation Causes skin irritation.

Exposure minutes	Not available.
Erythema value	Not available.
Oedema value	Not available.
Serious eye damage/eye irritation	Causes serious eye irritation.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	Suspected of causing genetic defects.
Mutagenicity	Suspected of causing genetic defects.
Carcinogenicity	May cause cancer.
ACGIH Carcinogens	
Ethene, trichloro- (CAS 79-01-6)	A2 Suspected human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Ethene, trichloro- (CAS 79-01-6)	Volume 63, Volume 106 - 1 Carcinogenic to humans.
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance	
Ethene, trichloro- (CAS 79-01-6)	Carcinogenic.
US NTP Report on Carcinogens: Anticipated carcinogen	
Ethene, trichloro- (CAS 79-01-6)	Reasonably Anticipated to be a Human Carcinogen.
Reproductive toxicity	May damage fertility or the unborn child.
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.
Specific target organ toxicity - single exposure	Narcotic effects.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. Chronic exposure to trichloroethylene may cause liver, kidney, central nervous system and peripheral nervous system effects.
Further information	Not available.
Name of Toxicologically Synergistic Products	Not available.

12. Ecological Information

Ecotoxicity	See below		
Components	Species	Test Results	
Ethene, trichloro- (CAS 79-01-6)			
Crustacea	EC50	Daphnia	2.2 mg/L, 48 Hours
Aquatic			
Fish	LC50	Flagfish (Jordanella floridae)	3.1 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Mobility in general	Not available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal Considerations

Disposal instructions	Consult authorities before disposal. This material and its container must be disposed of as hazardous waste. 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.
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Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
US RCRA Hazardous Waste U List: Reference	
Ethene, trichloro- (CAS 79-01-6)	U228
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.

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN1950
Proper shipping name	Aerosols, poison, Packing Group III (each not exceeding 1 L capacity)
Hazard class	Limited Quantity - US

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1950
Proper shipping name	AEROSOLS, non-flammable, containing substances in Class 6.1, packing group III
Hazard class	Limited Quantity - Canada
Special provisions	80

IATA/ICAO (Air)

Basic shipping requirements:

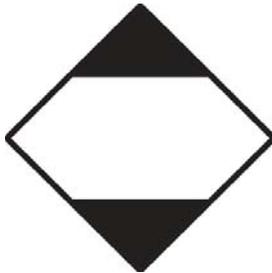
UN number	UN1950
Proper shipping name	Aerosols, non-flammable, containing substances in Class 6.1, packing group III
Hazard class	Limited Quantity - IATA

IMDG (Marine Transport)

Basic shipping requirements:

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

DOT; IMDG; TDG



IATA



15. Regulatory Information

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

Canada CEPA Schedule I: Listed substance

Carbon dioxide (CAS 124-38-9)	Listed.
Ethene, trichloro- (CAS 79-01-6)	Listed.

Canada WHMIS Ingredient Disclosure: Threshold limits

Carbon dioxide (CAS 124-38-9)	1 %
Ethene, trichloro- (CAS 79-01-6)	1 %

WHMIS status Controlled

WHMIS classification Class A - Compressed Gas, Class D - Division 1B, 2A, 2B

WHMIS labeling

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

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ethene, trichloro- (CAS 79-01-6)	0.1 %
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US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethene, trichloro- (CAS 79-01-6)	Listed.
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TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US CWA Section 311 Hazardous Substances: Listed substance

Ethene, trichloro- (CAS 79-01-6)	Listed.
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US CWA Section 307(a)(1) Toxic Pollutants: Listed substance

Ethene, trichloro- (CAS 79-01-6)	Listed.
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CERCLA Hazardous Substance List (40 CFR 302.4)

Ethene, trichloro- (CAS 79-01-6)	Listed.
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US – CAA Mandatory Reporting of GHGs: Global warming potential (100 year)

Carbon dioxide (CAS 124-38-9)	1
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US CAA Section 111 Volatile Organic Compounds: Listed substance

Ethene, trichloro- (CAS 79-01-6)	Listed.
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Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

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

Ethene, trichloro- (CAS 79-01-6)	Listed.
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US CAA Section 612 SNAP Program: Listed substance

Carbon dioxide (CAS 124-38-9)	Listed.
Ethene, trichloro- (CAS 79-01-6)	Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethene, trichloro-	79-01-6	95 - 98

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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

Carbon dioxide (CAS 124-38-9)	Listed.
Ethene, trichloro- (CAS 79-01-6)	Listed.

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

Ethene, trichloro- (CAS 79-01-6)	Listed.
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US - Illinois Chemical Safety Act: Listed substance

Ethene, trichloro- (CAS 79-01-6)	Listed.
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US - Louisiana Spill Reporting: Listed substance

Ethene, trichloro- (CAS 79-01-6) Listed.

US - Michigan Critical Materials Register: Parameter number

Ethene, trichloro- (CAS 79-01-6) 00079-01-6 Listed.

US - Minnesota Haz Subs: Listed substance

Carbon dioxide (CAS 124-38-9) Listed.

Ethene, trichloro- (CAS 79-01-6) Listed.

US - New Jersey RTK - Substances: Listed substance

Carbon dioxide (CAS 124-38-9) Listed.

Ethene, trichloro- (CAS 79-01-6) Listed.

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

Ethene, trichloro- (CAS 79-01-6) Listed.

US - North Carolina Toxic Air Pollutants: Listed substance

Ethene, trichloro- (CAS 79-01-6) Listed.

US - Texas Effects Screening Levels: Listed substance

Carbon dioxide (CAS 124-38-9) Listed.

Ethene, trichloro- (CAS 79-01-6) Listed.

US. Massachusetts RTK - Substance List

Carbon dioxide (CAS 124-38-9) Listed.

Ethene, trichloro- (CAS 79-01-6) Listed.

US. Pennsylvania RTK - Hazardous Substances

Carbon dioxide (CAS 124-38-9) Listed.

Ethene, trichloro- (CAS 79-01-6) Listed.

US. Rhode Island RTK

Ethene, trichloro- (CAS 79-01-6) Listed.

Inventory status

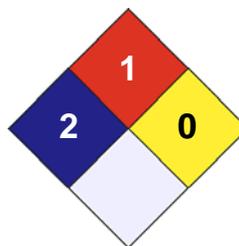
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply 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	* 2
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 22-December-2014**Effective date** 15-December-2014**Expiry date** 15-December-2017**Further information** For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.**Prepared by** Nu-Calgon Technical Service Phone: (314) 469-7000**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).