

1. Product and Company Identification

Product identifier	Cleanvu (4081-85)
Other means of identification	Not available
Recommended use	Glass cleaner
Recommended restrictions	None known.
Manufacturer information	Nu-Calgon 2611 Schuetz Road St. Louis, MO 63043 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)
Supplier	See above.

2. Hazards Identification

Physical hazards	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	
Label elements		



Signal word	Warning
Hazard statement	Contains gas under pressure; may explode if heated.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Butane		106-97-8	1-5
Isopropanol		67-63-0	1-5
Propane		74-98-6	1-5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. 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.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	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

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. 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.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. 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. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not smoke while using or until sprayed surface is thoroughly dry. 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 cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Use only in well-ventilated areas. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture, incinerate or crush. 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

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1000 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Isopropanol (CAS 67-63-0)	STEL	984 mg/m3
		400 ppm
	TWA	492 mg/m3 200 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Butane (CAS 106-97-8)	STEL	750 ppm
	TWA	600 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	800 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Isopropanol (CAS 67-63-0)	STEL	1230 mg/m3
		500 ppm
	TWA	983 mg/m3 400 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

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

Components	Type	Value
Isopropanol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Isopropanol (CAS 67-63-0)	STEL	800 ppm
		1225 mg/m3 500 ppm
	TWA	980 mg/m3 400 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/L	Acetone	Urine	*

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

Exposure guidelines

Canada - Alberta OELs: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5) 4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5) 4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

1,2-Ethanediamine (CAS 107-15-3)	Can be absorbed through the skin.
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5) 4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.

Morpholine (CAS 110-91-8)	Can be absorbed through the skin.
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)	
1,4-Dioxane (CAS 123-91-1)	Can be absorbed through the skin.
4-ethylmorpholine (CAS 100-74-3)	Can be absorbed through the skin.
Ethanol, 2-methoxy- (CAS 109-86-4)	Can be absorbed through the skin.
Morpholine (CAS 110-91-8)	Can be absorbed through the skin.

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 safety glasses with side shields (or goggles).

Skin protection

Hand protection Impervious gloves. Confirm with reputable supplier first.

Other Wear suitable protective clothing. As required by employer code.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards Not applicable.

General hygiene considerations 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. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Aerosol.
Physical state	Gas.
Form	Aerosol.
Color	Off-white.
Odor	Citrus
Odor threshold	Not available.
pH	9.88 - 10.88
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	0.9782
Partition coefficient (n-octanol/water)	Not available.
Flash point	-156.0 °F (-104.4 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
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	120 - 140 psi (130°F) 55 - 75 psi (70°F)
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 25 cps

Other information

Explosive properties	Not explosive.
Flame extension	None
Flammability (flash back)	No
Heat of combustion	2.8 kJ/g
Oxidizing properties	Not oxidizing.

10. Stability and Reactivity

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

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. May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects**Acute toxicity**

Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	680 mg/L, 2 Hours
	Rat	276000 ppm, 4 Hours
		658 mg/l/4h
<i>Oral</i>		
LD50	Not available	
Isopropanol (CAS 67-63-0)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	12800 mg/kg, HSDB 16.4 ml/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Rat	> 10000 ppm, 6 Hours, ECHA 16970 mg/l/4h, HMIRA
<i>Oral</i>		
LD50	Dog	4797 mg/kg, HSDB
	Mouse	3600 mg/kg, HSDB
	Rabbit	5030 mg/kg, HSDB
		5 g/kg, HSDB
	Rat	5.8 g/kg, ECHA

Components	Species	Test Results
Propane (CAS 74-98-6)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Mouse	539600 ppm, 120 Minutes, ECHA 520400 ppm, 120 Minutes, ECHA 1237 mg/L, 120 Minutes 57 %, 120 Minutes, ECHA 52 %, 120 Minutes
	Rat	> 12000000 ppm, 4 hours > 800000 ppm, 10 Minutes, ECHA > 1464 mg/L, 15 Minutes, HSDB 1442738 mg/m3, 10 Minutes, ECHA 1354944 mg/m3, 10 Minutes, ECHA 570000 ppm, 10 Minutes, ECHA 1355 mg/L, 10 Minutes
<i>Oral</i>		
LD50	Not available	
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary 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		
ACGIH sensitization		
2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5)	Dermal sensitization	
Canada - Alberta OELs: Irritant		
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	Irritant	
Canada - British Columbia OELs: Respiratory or skin sensitiser		
1,2-Ethanediamine (CAS 107-15-3)	Capable of causing respiratory, dermal or conjunctival sensitization.	
Canada - Manitoba OELs Hazard: Dermal sensitization		
2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5)	Dermal sensitization	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	See below.	
ACGIH Carcinogens		
1,4-Dioxane (CAS 123-91-1)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
Oxirane (CAS 75-21-8)	A2 Suspected human carcinogen.	
Canada - Alberta OELs: Carcinogen category		
Oxirane (CAS 75-21-8)	Suspected human carcinogen.	

Canada - Manitoba OELs: carcinogenicity

1,4-DIOXANE (CAS 123-91-1)	Confirmed animal carcinogen with unknown relevance to humans.
2-PROPANOL (CAS 67-63-0)	Not classifiable as a human carcinogen.
BUTYLATED HYDROXYTOLUENE (BHT), INHALABLE FRACTION AND VAPOR (CAS 128-37-0)	Not classifiable as a human carcinogen.
CITRAL, INHALABLE FRACTION AND VAPOR (CAS 5392-40-5)	Not classifiable as a human carcinogen.
ETHYLENE OXIDE (CAS 75-21-8)	Suspected human carcinogen.
ETHYLENEDIAMINE (CAS 107-15-3)	Not classifiable as a human carcinogen.
MORPHOLINE (CAS 110-91-8)	Not classifiable as a human carcinogen.

Canada - Quebec OELs: Carcinogen category

1,4-Dioxane (CAS 123-91-1)	Detected carcinogenic effect in animals.
Oxirane (CAS 75-21-8)	Suspected carcinogenic effect in humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

1,4-Dioxane (CAS 123-91-1)	Volume 11, Supplement 7, Volume 71 - 2B Possibly carcinogenic to humans.
Morpholine (CAS 110-91-8)	Volume 47, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.
Oxirane (CAS 75-21-8)	Volume 97, Volume 100F 1 Carcinogenic to humans.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	Volume 40, Supplement 7 - 3 Not classifiable as to carcinogenicity to humans.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-Dioxane (CAS 123-91-1)
Oxirane (CAS 75-21-8)

US NTP Report on Carcinogens: Anticipated carcinogen

1,4-Dioxane (CAS 123-91-1)	Reasonably Anticipated to be a Human Carcinogen.
----------------------------	--

US NTP Report on Carcinogens: Known carcinogen

Oxirane (CAS 75-21-8)	Known To Be Human Carcinogen.
-----------------------	-------------------------------

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

Oxirane (CAS 75-21-8)	Cancer
-----------------------	--------

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Teratogenicity	Not available.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity	See below		
Ecotoxicological data			
Components		Species	Test Results
Isopropanol (CAS 67-63-0)			
Algae	IC50	Algae	1000 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/L, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential			
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)		

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.
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.
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	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number UN1950
Proper shipping name Aerosols, non-flammable, (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
Hazard class Limited Quantity - Canada

IATA/ICAO (Air)

Basic shipping requirements:

UN number UN1950
Proper shipping name Aerosols, non-flammable
Hazard class Limited Quantity - IATA

IMDG (Marine Transport)

Basic shipping requirements:

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

DOT; IMDG; TDG



IATA



15. Regulatory Information

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

Canada CEPA Schedule I: Listed substance

Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Oxirane (CAS 75-21-8)	Listed.

Canada DSL Challenge Substances: Listed substance

1,4-Dioxane (CAS 123-91-1)	Listed.
Butane (CAS 106-97-8)	Listed.

Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number

Butane (CAS 106-97-8)	1 TONNES
Isopropanol (CAS 67-63-0)	1 TONNES
Propane (CAS 74-98-6)	1 TONNES

Canada Priority Substances List (Second List): Listed substance

Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Oxirane (CAS 75-21-8)	Listed.

Canada Prohibition of Certain Toxic Substances: Listed substance

Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
------------------------------------	---------

Export Control List (CEPA 1999, Schedule 3)

Ethanol, 2-methoxy- (CAS 109-86-4)	Restricted substance.
Oxirane (CAS 75-21-8)	Substance subject to notification or consent.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions

Not applicable

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)

Ethanol, 2-methoxy- (CAS 109-86-4)	1.0 % One-Time Export Notification only.
Sodium nitrite (CAS 7632-00-0)	1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,2-Ethanediamine (CAS 107-15-3)	Listed.
1,4-Dioxane (CAS 123-91-1)	Listed.
4-ethylmorpholine (CAS 100-74-3)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Morpholine (CAS 110-91-8)	Listed.
Oxirane (CAS 75-21-8)	Listed.
Propane (CAS 74-98-6)	Listed.
Sodium nitrite (CAS 7632-00-0)	Listed.

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

1,2-Ethanediamine (CAS 107-15-3)	5000 LBS
Oxirane (CAS 75-21-8)	10 LBS

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

Oxirane (CAS 75-21-8)	Cancer Reproductive toxicity Mutagenicity Central nervous system Skin sensitization Skin irritation Eye irritation respiratory tract irritation Acute toxicity Flammability
-----------------------	--

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - Yes 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.
Isopropanol	67-63-0	1-5

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

1,4-Dioxane (CAS 123-91-1)
Ethanol, 2-methoxy- (CAS 109-86-4)
Oxirane (CAS 75-21-8)

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

1,2-Ethanediamine (CAS 107-15-3)
Butane (CAS 106-97-8)
Oxirane (CAS 75-21-8)
Propane (CAS 74-98-6)

US state regulations

See below

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

1,2-Ethanediamine (CAS 107-15-3)	Listed.
1,4-Dioxane (CAS 123-91-1)	Listed.
4-ethylmorpholine (CAS 100-74-3)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Morpholine (CAS 110-91-8)	Listed.
Oxirane (CAS 75-21-8)	Listed.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	Listed.
Sodium nitrite (CAS 7632-00-0)	Listed.

US - Illinois Chemical Safety Act: Listed substance

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
4-ethylmorpholine (CAS 100-74-3)
Butane (CAS 106-97-8)
Ethanol, 2-methoxy- (CAS 109-86-4)
Isopropanol (CAS 67-63-0)
Morpholine (CAS 110-91-8)
Oxirane (CAS 75-21-8)
Propane (CAS 74-98-6)
Sodium nitrite (CAS 7632-00-0)

US - Louisiana Spill Reporting: Listed substance

1,2-Ethanediamine (CAS 107-15-3)	Listed.
1,4-Dioxane (CAS 123-91-1)	Listed.
4-ethylmorpholine (CAS 100-74-3)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Morpholine (CAS 110-91-8)	Listed.
Oxirane (CAS 75-21-8)	Listed.
Propane (CAS 74-98-6)	Listed.
Sodium nitrite (CAS 7632-00-0)	Listed.

US - Minnesota Haz Subs: Listed substance

1,2-Ethanediamine (CAS 107-15-3)	Listed.
1,4-Dioxane (CAS 123-91-1)	Listed.
4-ethylmorpholine (CAS 100-74-3)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Morpholine (CAS 110-91-8)	Listed.
Oxirane (CAS 75-21-8)	Listed.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	Listed.
Propane (CAS 74-98-6)	Listed.

US - New Jersey RTK - Substances: Listed substance

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
4-ethylmorpholine (CAS 100-74-3)
Butane (CAS 106-97-8)
Ethanol, 2-methoxy- (CAS 109-86-4)
Isopropanol (CAS 67-63-0)
Morpholine (CAS 110-91-8)
Oxirane (CAS 75-21-8)
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)
Propane (CAS 74-98-6)
Sodium nitrite (CAS 7632-00-0)

US - North Carolina Toxic Air Pollutants: Listed substance

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
Oxirane (CAS 75-21-8)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

1,4-Dioxane (CAS 123-91-1)
Oxirane (CAS 75-21-8)

US - Texas Effects Screening Levels Hazard Data: Simple asphyxiant

Propane (CAS 74-98-6)

US - Texas Effects Screening Levels: Listed substance

1,2-Ethanediamine (CAS 107-15-3)	Listed.
1,4-Dioxane (CAS 123-91-1)	Listed.
2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5)	Listed.
4-ethylmorpholine (CAS 100-74-3)	Listed.
Butane (CAS 106-97-8)	Listed.
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Morpholine (CAS 110-91-8)	Listed.
Oxirane (CAS 75-21-8)	Listed.
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)	Listed.
Propane (CAS 74-98-6)	Listed.
Sodium nitrite (CAS 7632-00-0)	Listed.

US - Washington Chemical of High Concern to Children: Listed substance

1,4-Dioxane (CAS 123-91-1)
Ethanol, 2-methoxy- (CAS 109-86-4)

US. Massachusetts RTK - Substance List

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
4-ethylmorpholine (CAS 100-74-3)
Butane (CAS 106-97-8)
Ethanol, 2-methoxy- (CAS 109-86-4)
Isopropanol (CAS 67-63-0)
Morpholine (CAS 110-91-8)
Oxirane (CAS 75-21-8)
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)
Propane (CAS 74-98-6)
Sodium nitrite (CAS 7632-00-0)

US. New Jersey Worker and Community Right-to-Know Act

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
Butane (CAS 106-97-8)
Ethanol, 2-methoxy- (CAS 109-86-4)
Isopropanol (CAS 67-63-0)
Oxirane (CAS 75-21-8)
Propane (CAS 74-98-6)
Sodium nitrite (CAS 7632-00-0)

US. Pennsylvania Worker and Community Right-to-Know Law

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
4-ethylmorpholine (CAS 100-74-3)
Butane (CAS 106-97-8)
Ethanol, 2-methoxy- (CAS 109-86-4)
Isopropanol (CAS 67-63-0)
Morpholine (CAS 110-91-8)
Oxirane (CAS 75-21-8)
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (CAS 128-37-0)
Propane (CAS 74-98-6)
Sodium nitrite (CAS 7632-00-0)

US. Rhode Island RTK

1,2-Ethanediamine (CAS 107-15-3)
1,4-Dioxane (CAS 123-91-1)
Butane (CAS 106-97-8)
Ethanol, 2-methoxy- (CAS 109-86-4)
Isopropanol (CAS 67-63-0)
Oxirane (CAS 75-21-8)
Propane (CAS 74-98-6)
Sodium nitrite (CAS 7632-00-0)

US. California Proposition 65

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-Dioxane (CAS 123-91-1) Listed: January 1, 1988

Oxirane (CAS 75-21-8)	Listed: July 1, 1987
US - California Proposition 65 - CRT: Listed date/Developmental toxin	
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed: January 1, 1989
Oxirane (CAS 75-21-8)	Listed: August 7, 2009
US - California Proposition 65 - CRT: Listed date/Female reproductive toxin	
Oxirane (CAS 75-21-8)	Listed: February 27, 1987
US - California Proposition 65 - CRT: Listed date/Male reproductive toxin	
Ethanol, 2-methoxy- (CAS 109-86-4)	Listed: January 1, 1989
Oxirane (CAS 75-21-8)	Listed: August 7, 2009

Inventory status

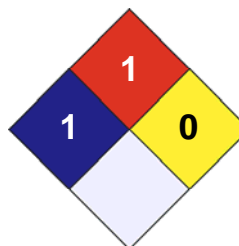
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
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 02-March-2017
Version # 01
Effective date 02-March-2017
Prepared by Nu-Calgon Technical Service Phone: (314) 469-7000
Other information For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.