

1. Product and Company Identification

Product identifier	Cal-Blue Plus Pressurized Spray (4182-35)
Other means of identification	Not available
Recommended use	Gas Leak Detector
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	Compressed 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. Store away from incompatible materials.
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	Not applicable.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
1,2-Propanediol		57-55-6	25

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

4. First Aid Measures

Inhalation	If symptoms develop move victim to fresh air. Get medical attention if symptoms persist.
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	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

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	Alcohol resistant foam. Water fog. Carbon dioxide.
Unsuitable extinguishing media	Not available.
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.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. 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. No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

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	Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. 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. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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	Avoid contact with eyes and skin. Wash hands thoroughly after handling. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Provide adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Use care in handling/storage. Ensure adequate ventilation. Use good industrial hygiene practices in handling this material. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Store locked up. Protect from sunlight. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Keep away from heat, open flames or other sources of ignition. Do not expose to temperatures exceeding 120°F (49°C). KEEP OUT OF REACH OF CHILDREN.

8. Exposure Controls/Personal Protection

Occupational exposure limits

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

Components	Type	Value	Form
1,2-Propanediol (CAS 57-55-6)	TWA	155 mg/m ³	Vapor and aerosol.
		10 mg/m ³	Aerosol.
		50 ppm	Vapor and aerosol.

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
1,2-Propanediol (CAS 57-55-6)	TWA	10 mg/m ³	Aerosol.

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

Exposure guidelines See above

Canada - Alberta OELs: Skin designation

1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

1,4-Dioxane (CAS 123-91-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

1,4-Dioxane (CAS 123-91-1) 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.

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 Rubber gloves. Confirm with a reputable supplier first.

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

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 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	Clear
Physical state	Gas.
Form	Compressed gas. Spray
Color	Blue
Odor	Neutral
Odor threshold	Not available.
pH	8.1 - 8.5 (Liquid)
Melting point/freezing point	15 °F (-9.44 °C) (Liquid)

Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available
Flash point	Not available.
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	150 psi
Vapor density	Not available
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available
Decomposition temperature	Not available.
Viscosity	325 - 425 cPs (Liquid)
Other information	
Explosive properties	Not explosive.
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. Oxides of nitrogen.

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
1,2-Propanediol (CAS 57-55-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	20800 mg/kg
<i>Inhalation</i>		
LC50	Not available	

Components	Species	Test Results
<i>Oral</i> LD50	Dog	19000 mg/kg
	Guinea pig	184000 mg/kg
	Mouse	23900 mg/kg
	Rabbit	14800 mg/kg
	Rat	20000 mg/kg
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		
Formaldehyde (CAS 50-00-0)	Dermal sensitization Respiratory sensitization	
Canada - British Columbia OELs: Respiratory or skin sensitiser		
Formaldehyde (CAS 50-00-0)	Capable of causing respiratory, dermal or conjunctival sensitization.	
Canada - Manitoba OELs Hazard: Dermal sensitization		
Formaldehyde (CAS 50-00-0)	Dermal sensitization	
Canada - Manitoba OELs Hazard: Respiratory sensitization		
Formaldehyde (CAS 50-00-0)	Respiratory sensitization	
Canada - Saskatchewan OELs Hazard Data: Sensitiser		
Formaldehyde (CAS 50-00-0)	Sensitizer.	
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	This product is not considered to be a carcinogen by IARC, NTP, or OSHA. See below.	
ACGIH Carcinogens		
1,4-Dioxane (CAS 123-91-1)	A3 Confirmed animal carcinogen with unknown relevance to humans.	
Formaldehyde (CAS 50-00-0)	A2 Suspected human carcinogen.	
Canada - Alberta OELs: Carcinogen category		
Formaldehyde (CAS 50-00-0)	Suspected human carcinogen.	
Canada - Manitoba OELs: carcinogenicity		
1,4-DIOXANE (CAS 123-91-1)	Confirmed animal carcinogen with unknown relevance to humans.	
FORMALDEHYDE (CAS 50-00-0)	Suspected human carcinogen.	
Canada - Quebec OELs: Carcinogen category		
1,4-Dioxane (CAS 123-91-1)	Detected carcinogenic effect in animals.	
Formaldehyde (CAS 50-00-0)	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.	
Formaldehyde (CAS 50-00-0)	Volume 88, Volume 100F 1 Carcinogenic to humans.	
US - California Proposition 65 - CRT: Listed date/Carcinogenic substance		
1,4-Dioxane (CAS 123-91-1)		
Formaldehyde (CAS 50-00-0)		
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

Formaldehyde (CAS 50-00-0)

Known To Be Human Carcinogen.

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

Formaldehyde (CAS 50-00-0)

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 an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity See below**Ecotoxicological data****Components**

		Species	Test Results
1,2-Propanediol (CAS 57-55-6)			
Crustacea	EC50	Daphnia	10000 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	710 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 Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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.

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
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
Hazard class	Limited Quantity - Canada
Special provisions	80, 107

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

Formaldehyde (CAS 50-00-0) Listed.

Canada DSL Challenge Substances: Listed substance

1,4-Dioxane (CAS 123-91-1) Listed.

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

Formaldehyde (CAS 50-00-0) 1 TONNES

Canada Priority Substances List (Second List): Listed substance

Formaldehyde (CAS 50-00-0) Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

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)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

1,4-Dioxane (CAS 123-91-1) Listed.

Formaldehyde (CAS 50-00-0) Listed.

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

Formaldehyde (CAS 50-00-0) 100 LBS

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

Formaldehyde (CAS 50-00-0) Cancer
 Skin sensitization
 Respiratory sensitization

Eye irritation
Skin irritation
respiratory tract irritation
Acute toxicity
Flammability

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
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)
Not regulated.

Other federal regulations

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

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

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

Formaldehyde (CAS 50-00-0)

US state regulations

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

1,4-Dioxane (CAS 123-91-1) Listed.
Formaldehyde (CAS 50-00-0) Listed.

US - Illinois Chemical Safety Act: Listed substance

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

US - Louisiana Spill Reporting: Listed substance

1,4-Dioxane (CAS 123-91-1) Listed.
Formaldehyde (CAS 50-00-0) Listed.

US - Minnesota Haz Subs: Listed substance

1,2-Propanediol (CAS 57-55-6) Listed.
1,4-Dioxane (CAS 123-91-1) Listed.
Formaldehyde (CAS 50-00-0) Listed.

US - New Jersey RTK - Substances: Listed substance

1,2-Propanediol (CAS 57-55-6)
1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

US - North Carolina Toxic Air Pollutants: Listed substance

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

US - Texas Effects Screening Levels: Listed substance

1,2-Propanediol (CAS 57-55-6) Listed.
1,4-Dioxane (CAS 123-91-1) Listed.
Formaldehyde (CAS 50-00-0) Listed.

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

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

US. Massachusetts RTK - Substance List

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

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

1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

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

1,2-Propanediol (CAS 57-55-6)
1,4-Dioxane (CAS 123-91-1)
Formaldehyde (CAS 50-00-0)

US. Rhode Island RTK

1,4-Dioxane (CAS 123-91-1)
 Formaldehyde (CAS 50-00-0)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

1,4-Dioxane (CAS 123-91-1) Listed: January 1, 1988
 Formaldehyde (CAS 50-00-0) Listed: January 1, 1988

Inventory status

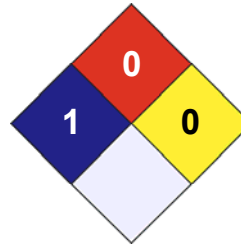
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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	0
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

27-January-2017

Version #

01

Effective date

27-January-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.