SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Electrical Contact Cleaner (4082-03)**

Other means of identification Not available

Recommended use Cleaner

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	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Reproductive toxicity (fertility, the unborn child)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement

Contains gas under pressure; may explode if heated.
Extremely flammable aerosol.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility.
Suspected of damaging the unborn child.
May cause damage to organs through prolonged or repeated exposure.

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas.
Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.
If on skin: Wash with plenty of water. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
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. Do not expose to temperatures exceeding 50°C/122°F.
Keep container tightly closed. Store locked up. Store in a well-ventilated place.

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

Mixture

Chemical name	Common name and synonyms	CAS number	%
1,1-Difluoroethane		75-37-6	40-70
Heptane		142-82-5	10-30
Heptane, Branched, Cyclic And Linear		426260-76-6	10-30
Isohexane		107-83-5	3-7
2,3-Dimethylbutane		79-29-8	1-5
Isopropanol		67-63-0	1-5
Neohexane		75-83-2	1-5
Pentane, 3-methyl-		96-14-0	1-5
Toluene		108-88-3	0.5-1.5
Hexane		110-54-3	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 occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Specific treatment (see product label).

Eye contact
Rinse with water. Get medical attention if irritation develops and persists. Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately. Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Ingestion
If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed
Skin irritation. May cause drowsiness or dizziness. May cause redness and pain. Prolonged exposure may cause chronic effects.

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. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children. Do not puncture or incinerate container. Do not store at temperatures above 49°C. Keep away from sources of ignition. No smoking.

5. Fire Fighting Measures

Suitable extinguishing media
Powder. Foam. Carbon dioxide (CO2).

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. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out. Firefighters should wear a self-contained breathing apparatus.

Special protective equipment and precautions for firefighters
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. Move containers from fire area if you can do so without risk. 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.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

General fire hazards
Extremely flammable aerosol.

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 breathing gas. 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. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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 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. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water. 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. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. 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. Do not re-use empty containers. Use only with adequate ventilation. Do not breathe gas. Avoid contact during pregnancy/while nursing. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Avoid contact with clothing. Use personal protective equipment as required. When using, do not eat, drink or smoke. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Pressurized container: Do not pierce or burn, even after use.
Conditions for safe storage, including any incompatibilities	Store locked up. 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. 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. Do not store at temperatures above 49 °C (120.2°F).

8. Exposure Controls/Personal Protection

Occupational exposure limits

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

Components	Type	Value
Heptane (CAS 142-82-5)	PEL	2000 mg/m3 500 ppm
Hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm
Isopropanol (CAS 67-63-0)	PEL	980 mg/m3 400 ppm

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

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2,3-Dimethylbutane (CAS 79-29-8)	STEL	1000 ppm
	TWA	500 ppm
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
Hexane (CAS 110-54-3)	TWA	50 ppm
Isohexane (CAS 107-83-5)	STEL	1000 ppm
	TWA	500 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
	TWA	200 ppm
Neohexane (CAS 75-83-2)	STEL	1000 ppm
	TWA	500 ppm
Pentane, 3-methyl- (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2,3-Dimethylbutane (CAS 79-29-8)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
Hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm
Isohexane (CAS 107-83-5)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm
Neohexane (CAS 75-83-2)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
Pentane, 3-methyl- (CAS 96-14-0)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,1-Difluoroethane (CAS 75-37-6)	TWA	2700 mg/m3
		1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	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. Eye wash facilities and emergency shower must be available when handling this product.

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 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. Wash hands and face before breaks and immediately after handling the product. 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.

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 0.690 g/mL

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 53 - 63 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 mm²/s @ 40°C

Other information

Flame projection 62.5 cm

Flammability (flash back)	Yes
Heat of combustion	23 kJ/g
VOC (Weight %)	44.0% (US federal), 44.0% (CARB/OTC/LADCO)

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	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Aerosol containers are unstable at temperatures above 49°C (120.2°F).
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Hydrogen fluoride.

11. Toxicological Information

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

Information on likely routes of exposure

Ingestion May be fatal if swallowed and enters airways.

Inhalation May be fatal if swallowed and enters airways. Prolonged inhalation may be harmful. May cause damage to organs by inhalation. Narcotic effects.

Skin contact Causes skin irritation.

US ACGIH Threshold Limit Values: Skin designation

Hexane (CAS 110-54-3) Can be absorbed through the skin.

Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

Components	Species	Test Results
1,1-Difluoroethane (CAS 75-37-6)		
Acute		
Inhalation		
LC50	Rat	> 64000 ppm
Oral		
LD50	Rat	> 1500 mg/kg
2,3-Dimethylbutane (CAS 79-29-8)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	
Heptane (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
LD50	Mouse	75 mg/l, 2 Hours
Oral		
LD50	Rat	15000 mg/kg
Heptane, Branched, Cyclic And Linear (CAS 426260-76-6)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	

Components	Species	Test Results
Hexane (CAS 110-54-3)		
Acute		
Dermal		
LD50	Rat	3000 mg/kg
Inhalation		
LC50	Mouse	48000 ppm, 4 Hours
	Rat	38500 mg/l/4h
Oral		
LD50	Rat	28710 mg/kg
		24 mg/kg
	Wistar rat	49 mg/kg
Isohexane (CAS 107-83-5)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	
Isopropanol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Inhalation		
LC50	Rat	16970 mg/l/4h
Oral		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5030 mg/kg
	Rat	4396 mg/kg
Pentane, 3-methyl- (CAS 96-14-0)		
Acute		
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	12196 mg/kg
		12125 mg/kg
		8390 mg/kg
		14.1 ml/kg
Inhalation		
LC50	Mouse	7100 mg/l, 4 Hours
		5320 ppm, 8 Hours
		400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours
		<= 28800 mg/m³, 4 Hours
		12200 ppm, 2 Hours
		8000 ppm, 4 Hours
		12.5 mg/l/4h

Components	Species	Test Results
Oral		
LD50	Rat	> 5580 mg/kg
		636 mg/kg

Skin corrosion/irritation Causes skin 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

Respiratory sensitization Not available.

Skin sensitization Prolonged or repeated exposure can cause drying, defatting and dermatitis.

US ACGIH Threshold Limit Values: Skin designation

Hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Hexane (CAS 110-54-3) Can be absorbed through the skin.

Germ cell mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Carcinogenicity Non-hazardous by WHMIS/OSHA criteria.

ACGIH Carcinogens

Isopropanol (CAS 67-63-0) A4 Not classifiable as a human carcinogen.
Toluene (CAS 108-88-3) A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Toluene (CAS 108-88-3) Volume 47, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.

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

Benzene (CAS 71-43-2) Carcinogenic.
Benzene, ethyl- (CAS 100-41-4) Carcinogenic.

Reproductive toxicity Suspected of damaging the unborn child. Suspected of damaging fertility.

Teratogenicity Toluene (benzene, methyl-) has caused fetotoxicity (reduced fetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males). These effects have been observed in the offspring of rats exposed by inhalation to 1200 or 1800 ppm toluene. These effects were observed in the absence of maternal toxicity.

Specific target organ toxicity - single exposure Narcotic effects.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.

Further information Not available.

Name of Toxicologically Synergistic Products Not available.

12. Ecological Information

Ecotoxicity See below

Components		Species	Test Results
Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
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
Toluene (CAS 108-88-3)			
Algae	IC50	Algae	433 mg/L, 72 Hours
Crustacea	EC50	Daphnia	7.645 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 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. Contents under pressure. Do not puncture, incinerate or crush. 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.

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

Toluene (CAS 108-88-3) U220

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.

14. Transport Information

General Canada: 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. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number UN1950

Proper shipping name Aerosols, 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, flammable

Hazard class Limited Quantity - Canada

IATA/ICAO (Air)

Basic shipping requirements:

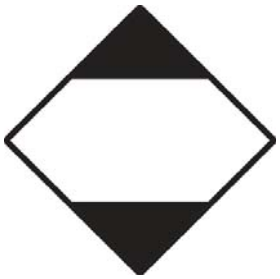
UN number	UN1950
Proper shipping name	Aerosols, flammable
Hazard class	Limited Quantity - IATA

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 Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Canada CEPA Schedule I: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.

Canada DSL Challenge Substances: Listed substance

Hexane (CAS 110-54-3)	Listed.

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

2,3-Dimethylbutane (CAS 79-29-8)	1 TONNES
Heptane (CAS 142-82-5)	1 TONNES
Hexane (CAS 110-54-3)	1 TONNES
Isohexane (CAS 107-83-5)	1 TONNES
Isopropanol (CAS 67-63-0)	1 TONNES
Neohexane (CAS 75-83-2)	1 TONNES
Pentane, 3-methyl- (CAS 96-14-0)	1 TONNES
Toluene (CAS 108-88-3)	1 TONNES

Canada WHMIS Ingredient Disclosure: Threshold limits

2,3-Dimethylbutane (CAS 79-29-8)	1 %
Heptane (CAS 142-82-5)	1 %
Hexane (CAS 110-54-3)	1 %
Isohexane (CAS 107-83-5)	1 %
Isopropanol (CAS 67-63-0)	1 %
Neohexane (CAS 75-83-2)	1 %
Pentane, 3-methyl- (CAS 96-14-0)	1 %
Toluene (CAS 108-88-3)	1 %

WHMIS status Controlled

WHMIS classification Class A - Compressed Gas, Class B - Division 5 - Flammable Aerosol, Class D - Division 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

Hexane (CAS 110-54-3)	1.0 %
Isopropanol (CAS 67-63-0)	1.0 %
Toluene (CAS 108-88-3)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Hexane (CAS 110-54-3)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Not regulated.

US CWA Section 311 Hazardous Substances: Listed substance

Toluene (CAS 108-88-3)	Listed.

US CWA Section 307(a)(1) Toxic Pollutants: Listed substance

Toluene (CAS 108-88-3)	Listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US – CAA Mandatory Reporting of GHGs: Global warming potential (100 year)

1,1-Difluoroethane (CAS 75-37-6)	140

US CAA Section 111 Volatile Organic Compounds: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US CAA Section 112(r) Accidental Release Prevention - Regulated Flammable Substance: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Regulated flammable substance.

US CAA Section 112(r) Accidental Release Prevention: Threshold quantity

1,1-Difluoroethane (CAS 75-37-6)	10000 LBS

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

1,1-Difluoroethane (CAS 75-37-6)	Listed.

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

Hexane (CAS 110-54-3)	Listed.
Toluene (CAS 108-88-3)	Listed.

US CAA Section 612 SNAP Program: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.

US CAA VOCs with Negligible Photochemical Activity: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes 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
Toluene	108-88-3	0.5-1.5

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

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Benzene (CAS 71-43-2)	Listed.
Benzene, ethyl- (CAS 100-41-4)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - Illinois Chemical Safety Act: Listed substance

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - Louisiana Spill Reporting List: Reportable quantity (total mass into atmosphere)

Hexane (CAS 110-54-3)	1000 LBS

US - Louisiana Spill Reporting: Listed substance

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - Michigan Critical Materials Register: Parameter number

Toluene (CAS 108-88-3)	00108-88-3 Listed.

US - Minnesota Haz Subs: Listed substance

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - New Jersey RTK - Substances: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Hexane (CAS 110-54-3)	Listed.

Toluene (CAS 108-88-3)	Listed.

US - North Carolina Toxic Air Pollutants: Listed substance

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - Texas Effects Screening Levels: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Toluene (CAS 108-88-3)	Listed.

US. Massachusetts RTK - Substance List

1,1-Difluoroethane (CAS 75-37-6)	Listed.
2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US. Pennsylvania RTK - Hazardous Substances

2,3-Dimethylbutane (CAS 79-29-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isohexane (CAS 107-83-5)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Neohexane (CAS 75-83-2)	Listed.
Pentane, 3-methyl- (CAS 96-14-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

US. Rhode Island RTK

1,1-Difluoroethane (CAS 75-37-6)	Listed.
Hexane (CAS 110-54-3)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Toluene (CAS 108-88-3)	Listed.

Inventory status

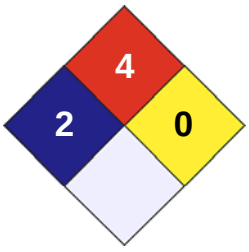
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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	* 2
FLAMMABILITY	4
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	12-March-2015
Effective date	01-March-2015
Expiry date	01-March-2018
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).