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 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	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

Environmental hazards Not classified.

WHMIS 2015 defined hazards Not classified

Label elements

Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause genetic defects. Suspected of damaging fertility or the unborn child. May cause cancer.

Precautionary statement

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing vapors. Use only outdoors or in a well-ventilated area.

Response IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical 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 or doctor if you feel unwell.
IF exposed or concerned: Get medical attention.

Storage Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Store locked up. Keep container tightly closed.

Disposal Dispose of container in accordance with local, regional, national and international regulations.

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	%
1,1-Difluoroethane		75-37-6	45-70*
Heptane		142-82-5	10-30*
Heptane, Branched, Cyclic And Linear		426260-76-6	10-30*
Naphtha (petroleum), hydrotreated light		64742-49-0	10-30*
Solvent naphtha (petroleum), light aliphatic		64742-89-8	10-30*

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

Composition comments	US GHS: The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
Skin contact	IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.
Eye contact	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 or doctor. Do NOT induce vomiting.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Dizziness. May cause respiratory irritation. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. 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	Dry chemical powder. Carbon dioxide. Foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
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.
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. 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. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol. 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. Avoid breathing gas. 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). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent entry into waterways, sewer, basements or confined areas. 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. Do not discharge into lakes, streams, ponds or public waters.

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. 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. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. 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. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition.

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 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). Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. 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
Heptane (CAS 142-82-5)	STEL	2050 mg/m3 500 ppm
	TWA	1640 mg/m3 400 ppm
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	1590 mg/m3 400 ppm
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	TWA	1590 mg/m3 400 ppm

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

Components	Type	Value
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

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

Components	Type	Value
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

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

Components	Type	Value
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

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

Components	Type	Value
Heptane (CAS 142-82-5)	STEL	2050 mg/m3
		500 ppm
	TWA	1640 mg/m3
		400 ppm
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	1590 mg/m3
		400 ppm
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	TWA	1590 mg/m3
		400 ppm

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
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	PEL	400 mg/m3
		100 ppm
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	PEL	400 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	400 mg/m3
		100 ppm
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	TWA	400 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 No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - Alberta OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

Toluene (CAS 108-88-3)	Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cumene (CAS 98-82-8)	Can be absorbed through the skin.

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

Cumene (CAS 98-82-8)	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 appropriate chemical resistant clothing. Use of an impervious apron is recommended. 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	Clear
Physical state	Gas.
Form	Aerosol
Color	Colorless
Odor	Mild hydrocarbon
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	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	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	6.70505 lb/gal Density VOC: 2.95054 lb/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC (Weight %)	% VOC: 44.0048% VOC Actual (g/l): 353.56300

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. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Reducing agents. Acids.
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	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. May cause stomach distress, nausea or vomiting.
Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Dizziness. May cause respiratory irritation. Skin irritation. May cause redness and pain.
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	> 437500 ppm, 4 Hours, ECHA
		> 64000 ppm
Oral		
LD50	Rat	> 1500 mg/kg

Components	Species	Test Results
Heptane (CAS 142-82-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours, HCHA
Inhalation		
LC50	Rat	> 73.5 mg/L, 4 Hours, ECHA
		> 29.3 mg/L, 4 Hours, ECHA
		103 mg/L, 4 Hours, HSDB
Oral		
LD50	Rat	> 5000 mg/kg, ECHA
Heptane, Branched, Cyclic And Linear (CAS 426260-76-6)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Not available	
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)		
Acute		
Dermal		
LD50	Guinea pig; Rabbit	> 9.4 ml/kg, 24 Hours, ECHA
	Rabbit	> 6000 mg/kg, 24 Hours, ECHA
		> 5000 mg/kg, 24 Hours, ECHA
		> 3750 mg/kg, 24 Hours, ECHA
		> 3000 mg/kg, 24 Hours, ECHA
		> 2000 mg/kg, ECHA
		> 2000 mg/kg, 24 Hours, ECHA
		> 1900 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Rat	> 8530 mg/m3, 4 Hours, ECHA
		> 7970 mg/m3, 4 Hours, ECHA
		> 7630 mg/m3, 4 Hours, ECHA
		> 7300 mg/m3, 4 Hours, ECHA
		> 5830 mg/m3, 4 Hours, ECHA
		> 5740 mg/m3, 4 Hours, ECHA
		> 5610 mg/m3, 4 Hours, ECHA
		> 5470 mg/m3, 4 Hours, ECHA
		> 5300 mg/m3, 4 Hours, ECHA
		> 5280 mg/m3, 4 Hours, ECHA
		> 5260 mg/m3, 4 Hours, ECHA
		> 5250 mg/m3, 4 Hours, ECHA
		> 5240 mg/m3, 4 Hours, ECHA
		> 5220 mg/m3, 4 Hours, ECHA
		> 5200 mg/m3, 4 Hours, ECHA
		> 5170 mg/m3, 4 Hours, ECHA
		> 5160 mg/m3, 4 Hours, ECHA
		> 5100 mg/m3, 4 Hours, ECHA
		> 5080 mg/m3, 4 Hours, ECHA

Components	Species	Test Results
		> 5050 mg/m3, 4 Hours, ECHA
		> 5040 mg/m3, 4 Hours, ECHA
		> 5020 mg/m3, 4 Hours, ECHA
		> 5000 mg/m3, 4 Hours, ECHA
		> 4980 mg/m3, 4 Hours, ECHA
		> 4970 mg/m3, 4 Hours, ECHA
		> 4420 mg/m3, 4 Hours, ECHA
		> 5.4 mg/L, 4 Hours, ECHA
		> 5.1 mg/L, 4 Hours, ECHA
		> 5.1 mg/L, 4 Hours, ECHA
		> 5 mg/L, 4 Hours, ECHA
		> 5 mg/L, 4 Hours, ECHA
		43767 mg/m3, 4 Hours, ECHA
		13700 ppm, 4 Hours, ECHA
		>= 5060 mg/m3, 4 Hours, ECHA
		30 mg/L, 4 Hours, ECHA
		28.1 mg/L, 4 Hours, ECHA
		25.7 mg/L, 4 Hours, ECHA
Oral		
LD50	Rat	> 7000 mg/kg, ECHA
		> 6000 mg/kg, ECHA
		> 5570 mg/kg, ECHA
		> 5200 mg/kg, ECHA
		> 5000 mg/kg, ECHA
		> 4800 mg/kg, ECHA
		> 4500 mg/kg, ECHA
		> 2000 mg/kg, ECHA
		> 25 ml/kg
		14063 mg/kg, ECHA
		6620 mg/kg, ECHA
		5800 mg/kg, ECHA
		5580 mg/kg, ECHA
		5390 mg/kg, ECHA
		4820 mg/kg, ECHA
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)		
Acute		
Dermal		
LD50	Rabbit	> 6000 mg/kg, 24 Hours, ECHA
		> 3750 mg/kg, 24 Hours, ECHA
		> 3000 mg/kg, 24 Hours, ECHA
		> 2000 mg/kg, ECHA
		> 2000 mg/kg, 24 Hours, ECHA
		> 1900 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Rat	> 8530 mg/m3, 4 Hours, ECHA
		> 7970 mg/m3, 4 Hours, ECHA
		> 7630 mg/m3, 4 Hours, ECHA

Components	Species	Test Results
		> 7300 mg/m3, 4 Hours, ECHA
		> 5830 mg/m3, 4 Hours, ECHA
		> 5740 mg/m3, 4 Hours, ECHA
		> 5610 mg/m3, 4 Hours, ECHA
		> 5470 mg/m3, 4 Hours, ECHA
		> 5300 mg/m3, 4 Hours, ECHA
		> 5280 mg/m3, 4 Hours, ECHA
		> 5260 mg/m3, 4 Hours, ECHA
		> 5250 mg/m3, 4 Hours, ECHA
		> 5240 mg/m3, 4 Hours, ECHA
		> 5220 mg/m3, 4 Hours, ECHA
		> 5200 mg/m3, 4 Hours, ECHA
		> 5170 mg/m3, 4 Hours, ECHA
		> 5160 mg/m3, 4 Hours, ECHA
		> 5100 mg/m3, 4 Hours, ECHA
		> 5080 mg/m3, 4 Hours, ECHA
		> 5050 mg/m3, 4 Hours, ECHA
		> 5040 mg/m3, 4 Hours, ECHA
		> 5020 mg/m3, 4 Hours, ECHA
		> 5000 mg/m3, 4 Hours, ECHA
		> 4980 mg/m3, 4 Hours, ECHA
		> 4970 mg/m3, 4 Hours, ECHA
		> 4420 mg/m3, 4 Hours, ECHA
		> 5.4 mg/L, 4 Hours, ECHA
		> 5.1 mg/L, 4 Hours, ECHA
		> 5.1 mg/L, 4 Hours, ECHA
		> 5 mg/L, 4 Hours, ECHA
		> 5 mg/L, 4 Hours, ECHA
		>= 5060 mg/m3, 4 Hours, ECHA
Oral		
LD50	Rat	> 7000 mg/kg, ECHA
		> 6000 mg/kg, ECHA
		> 5570 mg/kg, ECHA
		> 5200 mg/kg, ECHA
		> 5000 mg/kg, ECHA
		> 4800 mg/kg, ECHA
		> 4500 mg/kg, ECHA
		> 25 ml/kg, HSDB
		14063 mg/kg, ECHA
		6620 mg/kg, ECHA
		5800 mg/kg, ECHA
		5390 mg/kg, ECHA
		4820 mg/kg, ECHA

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 a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Mutagenicity May cause genetic defects.

Carcinogenicity May cause cancer.

ACGIH Carcinogens

Benzene (CAS 71-43-2)	A1 Confirmed human carcinogen.
Benzene, ethyl- (CAS 100-41-4)	A3 Confirmed animal carcinogen with unknown relevance to humans.
Naphthalene (CAS 91-20-3)	A3 Confirmed animal carcinogen with unknown relevance to humans.

Canada - Alberta OELs: Carcinogen category

Benzene (CAS 71-43-2)	Confirmed human carcinogen.

Canada - Manitoba OELs: carcinogenicity

BENZENE (CAS 71-43-2)	Confirmed human carcinogen.
ETHYL BENZENE (CAS 100-41-4)	Confirmed animal carcinogen with unknown relevance to humans.
NAPHTHALENE (CAS 91-20-3)	Confirmed animal carcinogen with unknown relevance to humans.

Canada - Quebec OELs: Carcinogen category

Benzene (CAS 71-43-2)	Detected carcinogenic effect in humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2)	Volume 29, Supplement 7, Volume 100F 1 Carcinogenic to humans.
Benzene, ethyl- (CAS 100-41-4)	Volume 77 - 2B Possibly carcinogenic to humans.
Cumene (CAS 98-82-8)	Volume 101 - 2B Possibly carcinogenic to humans.
Naphthalene (CAS 91-20-3)	Volume 82 - 2B Possibly carcinogenic to humans.
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)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Naphthalene (CAS 91-20-3)

US NTP Report on Carcinogens: Anticipated carcinogen

Cumene (CAS 98-82-8)	Reasonably Anticipated to be a Human Carcinogen.
Naphthalene (CAS 91-20-3)	Reasonably Anticipated to be a Human Carcinogen.

US NTP Report on Carcinogens: Known carcinogen

Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.

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

Benzene (CAS 71-43-2)	Cancer

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Teratogenicity Not available.

Specific target organ toxicity - single exposure Narcotic effects.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Ecotoxicological data

Components		Species	Test Results
Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/L, 96 hours
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/L, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.8 mg/L, 96 hours
			8.8 mg/L, 96 hours
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)			
Algae	IC50	Algae	4700 mg/L, 72 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia pulex)	2.7 - 5.1 mg/L, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8.8 mg/L, 96 hours
			8.8 mg/L, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Mobility in soil

Mobility in general No data available.

Other adverse effects Not available.

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 Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

General IMDG Regulated Marine Pollutant.

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
Special provisions	N82
Packaging exceptions	<1L - Limited Quantity
Packaging non bulk	None
Packaging bulk	None

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1950
Proper shipping name	AEROSOLS, flammable
Hazard class	Limited Quantity - Canada
Special provisions	80, 107

Packaging exceptions <1L - Limited Quantity

IATA/ICAO (Air)

Basic shipping requirements:

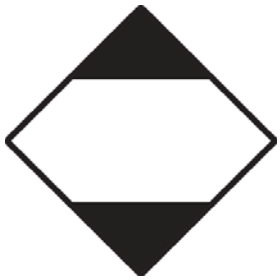
UN number UN1950
Proper shipping name Aerosols, flammable
Hazard class 2.1

IMDG (Marine Transport)

Basic shipping requirements:

UN number UN1950
Proper shipping name AEROSOLS
Hazard class 2

DOT; TDG



IATA; IMDG

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

1,1-Difluoroethane (CAS 75-37-6)	Listed.
Benzene (CAS 71-43-2)	Listed.
Naphthalene (CAS 91-20-3)	Listed.

Canada DSL Challenge Substances: Listed substance

Naphthalene (CAS 91-20-3)	Listed.

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

Benzene (CAS 71-43-2)	1 TONNES
Heptane (CAS 142-82-5)	1 TONNES
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	1 TONNES
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	1 TONNES
Toluene (CAS 108-88-3)	1 TONNES

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

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

Precursor Control Regulations

Toluene (CAS 108-88-3)	Class B

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)

All chemicals used are on the TSCA inventory.

CERCLA Hazardous Substance List (40 CFR 302.4)

Benzene (CAS 71-43-2)	Listed.
Benzene, ethyl- (CAS 100-41-4)	Listed.
Cumene (CAS 98-82-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Benzene (CAS 71-43-2)	Cancer Central nervous system Blood Aspiration Skin Eye respiratory tract irritation Flammability

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.
Solvent naphtha (petroleum), light aliphatic	64742-89-8	10-30*

Other federal regulations

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

Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

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

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

US state regulations See below

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

Benzene (CAS 71-43-2)	Listed.
Benzene, ethyl- (CAS 100-41-4)	Listed.
Cumene (CAS 98-82-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - Illinois Chemical Safety Act: Listed substance

Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Heptane (CAS 142-82-5)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

US - Louisiana Spill Reporting: Listed substance

Benzene (CAS 71-43-2)	Listed.
Benzene, ethyl- (CAS 100-41-4)	Listed.
Cumene (CAS 98-82-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - Michigan Critical Materials Register: Parameter number

Benzene (CAS 71-43-2)

Toluene (CAS 108-88-3)

US - Minnesota Haz Subs: Listed substance

Benzene (CAS 71-43-2)	Listed.
Benzene, ethyl- (CAS 100-41-4)	Listed.
Cumene (CAS 98-82-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	Listed.
Toluene (CAS 108-88-3)	Listed.

US - New Jersey RTK - Substances: Listed substance

1,1-Difluoroethane (CAS 75-37-6)
Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Heptane (CAS 142-82-5)
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
Naphthalene (CAS 91-20-3)
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)
Toluene (CAS 108-88-3)

US - North Carolina Toxic Air Pollutants: Listed substance

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)

US - Pennsylvania RTK - Hazardous Substances: Special hazard

Benzene (CAS 71-43-2)

US - Texas Effects Screening Levels: Listed substance

1,1-Difluoroethane (CAS 75-37-6)	Listed.
Benzene (CAS 71-43-2)	Listed.
Benzene, ethyl- (CAS 100-41-4)	Listed.
Cumene (CAS 98-82-8)	Listed.
Heptane (CAS 142-82-5)	Listed.
Heptane, Branched, Cyclic And Linear (CAS 426260-76-6)	Listed.
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	Listed.
Naphthalene (CAS 91-20-3)	Listed.
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

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

US. Massachusetts RTK - Substance List

1,1-Difluoroethane (CAS 75-37-6)
Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Heptane (CAS 142-82-5)
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
Naphthalene (CAS 91-20-3)
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)
Toluene (CAS 108-88-3)

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

1,1-Difluoroethane (CAS 75-37-6)
Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

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

Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Heptane (CAS 142-82-5)
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
Naphthalene (CAS 91-20-3)

Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)
Toluene (CAS 108-88-3)

US. Rhode Island RTK

Benzene (CAS 71-43-2)
Benzene, ethyl- (CAS 100-41-4)
Cumene (CAS 98-82-8)
Heptane (CAS 142-82-5)
Naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
Naphthalene (CAS 91-20-3)
Solvent naphtha (petroleum), light aliphatic (CAS 64742-89-8)
Toluene (CAS 108-88-3)

US. California Proposition 65

WARNING: This product can expose you to chemicals including benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Benzene, ethyl- (CAS 100-41-4)	Listed: June 11, 2004
Cumene (CAS 98-82-8)	Listed: April 6, 2010
Naphthalene (CAS 91-20-3)	Listed: April 19, 2002

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Toluene (CAS 108-88-3)	Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997

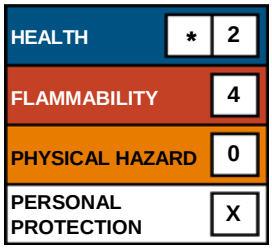
Inventory status

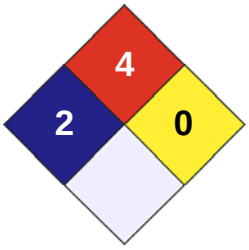
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*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





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.

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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.