

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

Product ID: BRODI SAFSOLV
Product Name: BRODI SAFSOLV

Revision Date: Apr 21, 2025
Version: 2.4

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Distributor's Name: BRODI SPECIALTY PRODUCTS LTD.
Address: 3175 14TH AVENUE, UNIT 1, MARKHAM, ON L3R 0H1

Emergency Phone: 1-800-535-5053
Information Phone Number: 1-877-744-0751

Product/Recommended Uses: Energized Electrical Cleaner [Industrial & Commercial use only]

After June 16, 2025, this chemical/product is and can only be domestically manufactured, imported, processed, or distributed in commerce for the following purposes until the following prohibitions take effect: (1) Processing as an intermediate a) for the manufacture of HFC-134a until June 18, 2033, and b) for all other processing as a reactant/intermediate until December 18, 2026; (2) Industrial and commercial use as a solvent for open-top batch vapor degreasing until December 18, 2025; (3) Industrial and commercial use as a solvent for closed-loop batch vapor degreasing until December 18, 2025, except for industrial and commercial use in batch vapor degreasing for land-based DoD defense systems by Federal agencies and their contractors until December 18, 2029, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing necessary for rocket engine cleaning by Federal agencies and their contractors until December 18, 2031, and except for industrial and commercial use of TCE in closed-loop and open-top batch vapor degreasing for essential aerospace parts and components and narrow tubing used in medical devices until December 18, 2031, and except for industrial and commercial use as a solvent for closed-loop batch vapor degreasing for rayon fabric scouring for end use in rocket booster nozzle production by Federal agencies and their contractors until December 18, 2034; (4) Industrial and commercial use in processing aid (a) for lithium battery separator manufacturing until December 18, 2029, and (b) for lead-acid battery separator manufacturing until December 18, 2044, and (c) for specialty polymeric microporous sheet material manufacturing until December 18, 2039, and (d) in process solvent used in battery manufacture; in process solvent used in polymer fiber spinning, fluoroelastomer manufacture and Alcantara manufacture; in extraction solvent used in caprolactam manufacture; and in precipitant used in beta-cyclodextrin manufacture until December 18, 2026; (5) Industrial and commercial uses for vessels of the Armed Forces and their systems, and in the maintenance, fabrication, and sustainment for and of such vessels and systems until December 18, 2034; and (6) Industrial and commercial use for laboratory use (a) for essential laboratory activities until December 18, 2074 and (b) for asphalt testing and recovery using manual centrifuge processes until December 18, 2029 and for asphalt testing and recovery until December 18, 2034.

**751.305(b)(10) - After December 18, 2027, all persons are prohibited from industrial and commercial use of TCE in energized electrical cleaners and from the manufacturing (including importing), processing, and distribution in commerce of TCE for such a use.

SECTION 2) HAZARDS IDENTIFICATION

Classification

Gases Under Pressure - Compressed Gas
Carcinogenicity - Category 1B
Germ Cell Mutagenicity - Category 2
Eye Irritation - Category 2
Skin Irritation - Category 2
Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) - Category 3

Pictograms



Signal Word

Danger

Hazardous Statements - Physical

H280 - Contains gas under pressure; may explode if heated.

Hazardous Statements - Health

H350 - May cause cancer.
H341 - Suspected of causing genetic defects.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P264 - Wash hands thoroughly after handling.

P261 - Avoid breathing mist, vapors or spray.

P271 - Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 - Call a POISON CENTER or doctor if you feel unwell.

P308 + P313 - IF exposed or concerned: Get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

P332 + P313 - If skin irritation occurs: Get medical attention.

Precautionary Statements - Storage

P405 - Store locked up.

P410 + P403 - Protect from sunlight. Store in a well-ventilated place.

Precautionary Statements - Disposal

P501 - Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
79-01-6	Trichloroethylene	68% - 100%
124-38-9	Carbon Dioxide	1% - 3%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If exposed/feel unwell/concerned: Call a POISON CENTER or doctor. Eliminate all ignition sources if safe to do so.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Most Important Symptoms/Effects, Acute and Delayed

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Do not direct a solid stream of water or foam into hot, burning pools this may results in frothing and increase fire intensity.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Product is highly flammable and forms explosive mixtures with air, oxygen, and all oxidizing agents. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a build up of internal pressures. Cool with water.

Empty Containers retain product residue which may exhibit hazards of material; therefore do not pressurize, cut, glaze, weld or use for any other purposes.

Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Wear liquid tight chemical protective clothing in combination with positive pressure self-contained breathing apparatus (SCBA).

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Absorb liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them.

Store at temperatures below 120°F.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	ACGIH TWA (mg/m3)
Carbon Dioxide	9000	5000					1	
Trichloro-ethylene		100 (a) / 200 ceiling		300 / 5 mins. in any 2 hrs.(a)			1,2	

Chemical Name	ACGIH TWA (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)
Carbon Dioxide	5000		30000		Asphyxia		9000	5000
Trichloro-ethylene	10		25	A2	CNS impair; cognitive decrements; renal toxicity	A2; BEI		25b

Chemical Name	NIOSH STEL (mg/m3)	NIOSH STEL (ppm)	NIOSH Carcinogen
Carbon Dioxide	54000	30000	
Trichloro-ethylene			1

(C) - Ceiling limit, A2 - Suspected Human Carcinogen, BEI - Substances for which there is a Biological Exposure Index or Indices, CNS - Central nervous system, impair - Impairment

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	12.20 lb/gal
Density VOC	11.93 lb/gal
% VOC	97.75%

Appearance	Clear Liquid
Odor Threshold	N.A.
Odor Description	N.A.
pH	N.A.
Water Solubility	N.A.
Flammability	Will not burn
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Density	N.A.
Melting Point	N.A.
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	Slower than ether

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions to Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials. Dropping containers may cause bursting.

Incompatible Materials

Avoid strong oxidizers, reducers, acids, and alkalis.

Hazardous Reactions/Polymerization

Will not occur.

Hazardous Decomposition Products

No data available.

SECTION 11) TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation

Causes skin irritation.

Serious Eye Damage/Irritation

Causes serious eye irritation.

Carcinogenicity

May cause cancer.

79-01-6 Trichloroethylene

This substance is carcinogenic to humans.

Germ Cell Mutagenicity

Suspected of causing genetic defects.

Reproductive Toxicity

79-01-6 Trichloroethylene

Causes toxicity to human reproduction or development. Possible teratogen in humans.

Respiratory/Skin Sensitization

No data available.

Specific Target Organ Toxicity - Single Exposure

May cause drowsiness or dizziness

79-01-6 Trichloroethylene

The substance is irritating to the respiratory tract. The substance may cause effects on the central nervous system, liver and kidneys. This may result in impaired functions. Exposure can cause headache, dizziness, lightheadedness, and passing out. High exposure could cause irregular heart beat which can be fatal. Exposure at high concentrations could cause unconsciousness.

Specific Target Organ Toxicity - Repeated Exposure

79-01-6 Trichloroethylene

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system. This may result in fatigue, irritability and mental and memory disturbances. The substance may have effects on the liver, kidneys and immune system. Chronic exposure may cause organic injury. May cause personality changes such as depression, anxiety or irritability.

Aspiration Hazard

No data available.

Acute Toxicity

79-01-6 Trichloroethylene

If swallowed the substance may cause vomiting and could result in aspiration pneumonitis. INHALATION: symptoms range from irritation of the nose and throat to nausea, an attitude of irresponsibility, blurred vision, and finally disturbance of central nervous system resulting in cardiac failure. INGESTION: symptoms similar to inhalation.

79-01-6 Trichloroethylene

LC50 (rat): Approximately 8000 ppm (4-hour exposure) (5); 12500 ppm (4-hour exposure) (20)

LC50 (mouse): 8450 ppm (4-hour exposure) (3)

LD50 (oral, rat): 7200 mg/kg (cited as 4.92 mL/kg) (5)

LD50 (oral, male mouse): 2402 mg/kg (4)

LD50 (dermal, rabbit): Greater than 29000 mg/kg (cited as greater than 20 mL/kg) (5)

Likely Routes of Exposure

79-01-6 Trichloroethylene

The substance can be absorbed into the body by inhalation, by ingestion and through the skin.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

Harmful to aquatic life with long lasting effects

Persistence and Degradability

No data available.

Bio-Accumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

	IATA Information	IMDG Information	U.S. DOT Information
UN number:	UN1950	UN1950	UN1950

Proper shipping name:	Aerosols, non-flammable	Aerosols	Aerosols
Hazard class:	2.2	2.2	2.2
Packaging group:	N.A.	N.A.	N.A.
Note:	(LTD QTY)	(LTD QTY)	(LTD QTY)

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
79-01-6	Trichloroethylene	68% - 100%	SARA313, HAPS, SARA312, VHAPS, VOC, TSCA, RCRA, ACGIH, California Proposition 65 - Cancer & Developmental & Toxicity Male, OSHA
124-38-9	Carbon Dioxide	1% - 3%	SARA312, TSCA, ACGIH, OSHA

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SECTION 16) OTHER INFORMATION

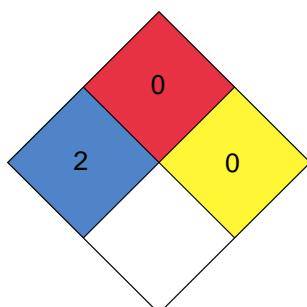
Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

Health	1 / 2
FLAMMABILITY	0
Physical Hazard	0
Personal Protection	B

NFPA



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

DISCLAIMER

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