

SAFETY DATA SHEET

1. Identification

Product identifier 0290-52118-1 Brodi Mechanisolv Degreaser

Other means of identification

Product code 1000017020

Recommended use CLEANER

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Brodi Specialty Products

Address 3175 – 14th Avenue
Unit #1
Markham, ON L3R 0H1
Canada

Telephone 877-744-0751

E-mail Not available.

Emergency phone number Emergency - Outside US 1-952-852-4646
Emergency - US 1-866-836-8855

Supplier Not available.

2. Hazard(s) identification

Physical hazards	Gases under pressure	Compressed gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects

Label elements



Signal word Danger

Hazard statement Pressurized container: May burst if heated. Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of causing genetic defects. May cause cancer.

Precautionary statement

Prevention 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 breathe gas. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3
Other hazards	None known.	
Supplemental information	None.	

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Trichloroethylene		79-01-6	60 - 100
1,2-Butylene Oxide		106-88-7	0.1 - 1
Other components below reportable levels			1 - 5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove and isolate contaminated clothing and shoes. Wash off immediately with plenty of water. If skin irritation occurs: Get medical advice/attention. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. 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. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	In case of shortness of breath, give oxygen. 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. Keep victim under observation. Keep victim warm.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. 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.

General fire hazards

Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

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. Do not breathe 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 product from entering drains. 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 release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. 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. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not 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. Ground and bond containers when transferring material. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not re-use empty containers. Do not breathe gas. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Store locked up. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. 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. Stored containers should be periodically checked for general condition and leakage. Keep away from food, drink and animal feedingsuffs. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values****Components****Type****Value**

Trichloroethylene (CAS 79-01-6)

STEL

25 ppm

TWA

10 ppm

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

Trichloroethylene (CAS 79-01-6)

STEL

537 mg/m3

TWA

100 ppm

269 mg/m3

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

Components	Type	Value
		50 ppm

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

Components	Type	Value
Trichloroethylene (CAS 79-01-6)	STEL	25 ppm
	TWA	10 ppm

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

Components	Type	Value
Trichloroethylene (CAS 79-01-6)	STEL	25 ppm
	TWA	10 ppm

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

Components	Type	Value
Trichloroethylene (CAS 79-01-6)	STEL	25 ppm
	TWA	10 ppm

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

Components	Type	Value
Trichloroethylene (CAS 79-01-6)	STEL	1070 mg/m3
	TWA	200 ppm 269 mg/m3 50 ppm

Biological limit values
ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Trichloroethylene (CAS 79-01-6)	15 mg/l	Trichloroacetic acid	Urine	*
	0.5 mg/l	Trichloroethano l, without hydrolysis	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). Avoid contact with eyes.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Avoid contact with the skin. Wear chemical protective equipment that is specifically recommended by the manufacturer. Use of an impervious apron is recommended.

Respiratory protection If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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.

9. Physical and chemical properties

Appearance

Physical state	Gas.
Form	Aerosol. Compressed gas.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - upper (%)	52 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	55 - 75 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	788 °F (420 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	1.454 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Risk of ignition.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Heat. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Information on toxicological effects**Acute toxicity**

In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Narcotic effects. May cause respiratory irritation.

Components**Species****Test Results**

1,2-Butylene Oxide (CAS 106-88-7)

Acute**Dermal**

LD50

Rabbit

1500 - 2950 mg/kg, 24 Hours

1.77 ml/kg, 24 Hours

Inhalation

Vapor

LC50

Rat

> 6.3 mg/l

Oral

LD50

Rat

1 - 1.58 mg/kg

1100 µl/kg

1.3 ml/kg

Trichloroethylene (CAS 79-01-6)

Acute**Dermal**

LD50

Rat

19031 mg/kg

Inhalation

LC50

Dog; Mouse; Rabbit; Rat

8450 ppm, 4 Hours

Rat

12500 ppm, 4 Hours

1044 mg/l/4h

Oral

LD50

Dog; Mouse; Rat

2900 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization**Respiratory sensitization**

Not a respiratory sensitizer.

Skin sensitization

This product is not expected to cause skin sensitization.

Germ cell mutagenicity

Hazardous by WHMIS criteria. Suspected of causing genetic defects.

Carcinogenicity

Cancer hazard.

ACGIH Carcinogens

Trichloroethylene (CAS 79-01-6)

A2 Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

TRICHLOROETHYLENE (CAS 79-01-6)

Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

1,2-Butylene Oxide (CAS 106-88-7)

2B Possibly carcinogenic to humans.

Trichloroethylene (CAS 79-01-6)

If <1L: Consumer Commodity Carcinogenic to humans.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not likely, due to the form of the product.

Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
Further information	Symptoms may be delayed.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
1,2-Butylene Oxide (CAS 106-88-7)			
Aquatic			
Algae	IC50	Algae	500 mg/L, 72 Hours
Crustacea	EC50	Daphnia	69.8 mg/L, 48 Hours
Fish	LC50	Fish	160, 96 Hours
Trichloroethylene (CAS 79-01-6)			
Aquatic			
Crustacea	EC50	Daphnia	2.2 mg/L, 48 Hours
Fish	LC50	Fish	40.8933, 96 Hours
		Flagfish (Jordanella floridae)	3.1 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

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

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Trichloroethylene 2.61

Mobility in soil No data 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. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, non-flammable
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	If <1L: Limited Quantity
Environmental hazards	D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable

Transport hazard class(es)**Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards** No.**ERG Code** 2L**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Other information****Passenger and cargo aircraft** Allowed with restrictions.**Cargo aircraft only** Allowed with restrictions.**IMDG****UN number** UN1950**UN proper shipping name** AEROSOLS**Transport hazard class(es)****Class** 2.2**Subsidiary risk** -**Label(s)** None**Packing group** Not applicable.**Environmental hazards****Marine pollutant** No.**EmS** Not available.**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**IATA; IMDG; TDG****General information**

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information**Canadian regulations****Controlled Drugs and Substances Act**

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

The product is classified and labelled in accordance with EC directives or respective national laws. Pregnant women should not work with the product, if there is the least risk of exposure.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

Issue date 11-27-2018

Revision date 11-27-2018

Version # 02

References ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision information Hazard(s) identification: Hazard statement
Hazard(s) identification: Other hazards
Composition/information on ingredients: Component information
Fire-fighting measures: General fire hazards
Accidental release measures: Personal precautions, protective equipment and emergency procedures
Exposure controls/personal protection: PPE Symbols