

1. Product and company identification

Product identifier

Trade name: 519L5 - Silicone Parting Agent Spray

This safety data sheet pertains to the following products:
519L5 = Silikon-Trennmittel

Relevant identified uses of the substance or mixture and uses advised against

General use: Release agent and lubricating agent, for orthopedic procedures.
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name: Otto Bock Health Care
Street/POB-No.: 3820 W. Great Lakes Drive
Postal Code, city: Salt Lake City, UT 84120
USA
WWW: www.ottobockus.com
Telephone: +1 (801) 956-2400
Telefax: +1 (801) 956-2401
Department responsible for information:
Quality Department,
Telephone: +1 (801) 954-2304 (7 AM – 3 PM, Mountain Time),
Email: USRegulatory@ottobock.com
Additional information: Corporate headquarters:
Ottobock SE & Co. KGaA
Max-Näder-Straße 15
Duderstadt
Germany

Emergency phone number

CHEMTREC, Telephone: +1 (800) 424-9300
Transport:
CONSULTANK Lutz Harder GmbH (Contract QUALI003)
Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: liquid
Form: Aerosol
Color: colorless
Odor: weak
Classification: Flammable Aerosol - Category 1. Compressed Gas.
Hazard symbols:



Signal word: **Danger**

Hazard statements: Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.

Precautionary statements: 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.
Protect from sunlight. Store in a well-ventilated place.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified

Inhaling can lead to irritations of the respiratory tract and mucous membrane. Higher doses may lead to a narcotic effect.

Propellent:

Contact with the product can cause cold burns or frostbite.

Heating will lead to pressure increase: Danger of bursting and explosion. Vapors may form explosive mixtures with air.

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Preparation with Polydimethylsiloxane and propellent.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 106-97-8	n-Butane, <0,1% 1,3-Butadiene	>= 50 %	Flammable Gas - Category 1. Liquefied Gas.
CAS 74-98-6	Propane	5 - 10 %	Flammable Gas - Category 1. Compressed Gas.

4. First aid measures

General information: If medical advice is needed, have product container or label at hand.

In case of inhalation: Move victim to fresh air. If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen.
Seek medical aid in case of troubles.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse.
Cover frostbitten skin with sterile tissue.
Seek medical aid in case of troubles.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

Most important symptoms/effects, acute and delayed

Inhalation causes narcotic effects/intoxication.

In case of prolonged exposure: Nausea, drowsiness, headache, agitation, fatigue, dizziness, unconsciousness.

In case of high vapor concentrations: CNS disorders, unconsciousness.

Even short-term inhalation of larger quantities of gas may cause death. Risk of suffocation!

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

-76 °F (n-Butane)

Auto-ignition temperature: No data available

Suitable extinguishing media:

Water spray jet, foam, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Extremely flammable aerosol. Vapors form explosive mixtures with air.

In case of fire may be liberated: silicon dioxide, carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus.

Additional information:

Heating causes rise in pressure with risk of bursting.

Fight fire from a safe distance.

Cool endangered containers with water spray and, if possible, remove from danger zone.

6. Accidental release measures

Personal precautions:

Eliminate all ignition sources if safe to do so. Provide adequate ventilation.

Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.

Do not breathe vapor/aerosol. Avoid contact with skin and eyes.

Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction.

Environmental precautions:

Do not allow to enter soil, sewage, water bodies, lower level rooms or pits.

Gas/vapor is heavier than air and can accumulate in closed spaces, particularly on the ground/in lower lying areas.

Suppress gases/vapors/mists with water spray jet.

Methods for clean-up:

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

Thoroughly clean surrounding area.

In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out).

Special danger of slipping by leaking/spilling product.

Clean contaminated area with soap and water.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse. Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation. Do not spray in the eyes.

Precautions against fire and explosion:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.

Storage

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.
Keep container dry.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Store containers in upright position.

Hints on joint storage:

Keep away from combustible material. Keep away from combustible materials.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
106-97-8	n-Butane, <0,1% 1,3-Butadiene	USA: ACGIH: TWA	1,000 ppm
		USA: IDLH: TWA	1,600 ppm [>10% LEL]
		USA: NIOSH: TWA	1,900 mg/m ³ ; 800 ppm
74-98-6	Propane	USA: IDLH: TWA	2,100 ppm [10% LEL]
		USA: NIOSH: TWA	1,800 mg/m ³ ; 1,000 ppm
		USA: OSHA: TWA	1,800 mg/m ³ ; 1,000 ppm

Engineering controls

Provide good ventilation and/or an exhaust system in the work area.
Explosion protection required.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Flame retardant, antistatic and chemical resistant protective clothing.
Recommendation: Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: butyl caoutchouc (butyl rubber) - Breakthrough time: 480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations:

Do not spray on an open flame or other ignition source. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use. Provide adequate ventilation, and local exhaust as needed.
Do not breathe vapor/aerosol. Do not get in eyes, on skin, or on clothing.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation.

Environmental exposure controls

Do not allow to penetrate into soil, waterbodies or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 68 °F and 101.3 kPa: liquid Form: Aerosol Color: colorless
Odor:	weak
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	> -216.4 °F (n-Butane)
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	-76 °F (n-Butane)
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 1.50 Vol-% UEL (Upper Explosive Limit): 10.00 Vol-%
Vapor pressure:	at 68 °F: 2,700 hPa at 122 °F: 7,300 hPa
Vapor density:	No data available
Density:	at 68 °F: 0.6 g/mL
Water solubility:	at 68 °F: practically insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	> 250°C (Polydimethylsiloxane)
Ignition temperature:	689 °F (n-Butane)

10. Stability and reactivity

Reactivity:	Extremely flammable aerosol. Vapors may form explosive mixtures with air.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Pressurised container: May burst if heated.
Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Incompatible materials:	Reacts violently with strong oxidizing agents. (Danger of explosion)
Hazardous decomposition products:	For the silicone component: Measurements taken at temperatures exceeding 302 °F have revealed that a small quantity of formaldehyde splits off through oxidative decomposition.
Thermal decomposition:	> 250°C (Polydimethylsiloxane)

11. Toxicological information

Toxicological tests

Acute toxicity:	LD50 Rat, oral: > 5,000 mg/kg (Literature) LD50 Rat, dermal: > 2,008 mg/kg (ext. test report)
Toxicological effects:	Acute toxicity (oral): Based on available data, the classification criteria are not met. Acute toxicity (dermal): Based on available data, the classification criteria are not met. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Based on available data, the classification criteria are not met. Not an irritant (Rabbit; ext. test report) Serious eye damage/irritation: Based on available data, the classification criteria are not met. Mild irritant (Rabbit; ext. test report) Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Based on available data, the classification criteria are not met. Not sensitising (Method Magnusson-Klingmann, Guinea pig - ext. test report) Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met. No mutagenity, after different in-vitro studies. (OECD 471) Carcinogenicity: Based on available data, the classification criteria are not met. Rat, oral, NOAEL: >= 1000 mg/kg (Polydimethylsiloxane) Reproductive toxicity: Based on available data, the classification criteria are not met. Rabbit, oral, NOAEL: >= 1000 mg/kg (Polydimethylsiloxane) Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Lack of data. Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.

Symptoms

In case of inhalation:
Information about n-Butane: Inhalation causes narcotic effects/intoxication.
In case of prolonged exposure: Nausea, drowsiness, headache, agitation, fatigue, dizziness, unconsciousness.
In case of high vapor concentrations: CNS disorders, unconsciousness.
Even short-term inhalation of larger quantities of gas may cause death. Risk of suffocation!
After contact with skin:
In case of spraying: Contact with the product can cause cold burns or frostbite.

12. Ecological information

Ecotoxicity

Aquatic toxicity: According to experience to date, toxicity to fish is not expected.
Effects in sewage plants: According to current data, no harmful effects are expected with release to sewage treatment facility.

Mobility in soil

No data available

Persistence and degradability

Further details: For the silicone component:
Product is not biodegradable. Polydimethylsiloxane are to a certain extent partly degradable through abiotic processes.

Additional ecological information

Volatile organic compounds (VOC):
91.6 % by weight (= 218g/400ml)
General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

Product

Recommendation: Special waste. Dispose of waste according to applicable legislation.
Do not open with force or incinerate, even when empty.
Do not dispose of with household waste.

Package

Recommendation: Empty carefully and completely, if possible.
Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.
Handle empty containers with care. Incineration may cause explosion.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

UN 1950

UN proper shipping name

ADR/RID, IMDG:

UN 1950, AEROSOLS

IATA-DGR:

UN 1950, AEROSOLS, FLAMMABLE

Transport hazard class(es)

ADR/RID:

Class 2, Code: 5F

IMDG:

Class 2, Subrisk -, see SP63

IATA-DGR:

Class 2.1



Packing group

ADR/RID, IATA-DGR:

not applicable

IMDG:

-

Environmental hazards

Marine pollutant:

no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

USA: Department of Transportation (DOT)

Identification number:

UN1950

Proper shipping name:

UN 1950, AEROSOLS

Hazard class or Division:

2.1

Labels:

2.1

Special Provisions:

N82

Packaging – Exceptions:

306

Packaging – Non-bulk:

None

Packaging – Bulk:

None

Quantity limitations – Passenger aircraft / rail:

75 kg

Quantity limitations – Cargo only:

150 kg

Vessel stowage – Location:

A

Vessel stowage – Other:

25, 87, 126, 157



Sea transport (IMDG)

UN number: UN 1950
Proper shipping name:: UN 1950, AEROSOLS
Class or division, Subsidiary risk: Class 2, Subrisk -, see SP63
Packing Group: -
EmS: F-D, S-U
Special Provisions: 63 190 277 327 344 381 959
Limited quantities: See SP277
Excepted quantities: E0
Package - Instructions: P207, LP200
Package - Provisions: PP87, L2
IBC - Instructions: -
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: -
Tank instructions - Provisions: -
Stowage and handling: SW1 SW22
Segregation: SG69
Properties and observations: -
Marine pollutant: no
Segregation group: none

Air transport (IATA)

UN/ID number: UN 1950
Proper shipping name:: UN 1950, AEROSOLS, FLAMMABLE
Class or division, Subsidiary risk: Class 2.1
Hazard label: Flamm. gas
Excepted Quantity Code: E0
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y203 - Max. Net Qty/Pkg. 30 kg G
Passenger and Cargo Aircraft: Pack.Instr. 203 - Max. Net Qty/Pkg. 75 kg
Cargo Aircraft only: Pack.Instr. 203 - Max. Net Qty/Pkg. 150 kg
Special Provisions: A145 A167 A802
Emergency Response Guide-Code (ERG): 10L

15. Regulatory information

National regulations - U.S. Federal Regulations

n-Butane, <0,1% 1,3-Butadiene: TSCA Inventory: listed
Clean Air Act:
CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f
NIOSH Recommendations:
Occupational Health Guideline: 0068*

Propane: TSCA Inventory: listed
Clean Air Act:
CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f
NIOSH Recommendations:
Occupational Health Guideline: 0524

National regulations - U.S. State Regulations

n-Butane, <0,1% 1,3-Butadiene: Delaware Air Quality Management List:
DRQ: F 1000** - RQ State: State requirements differs from Federal
Massachusetts Haz. Substance codes: 4,5,6
Minnesota Haz. Substance:
Codes: A - Ratings: - - Status: Title III
New Jersey RTK Hazardous Substance:
DOT: 1011 - Sub No.: 0273 - TPQ: -
Pennsylvania Haz. Substance code: -
Washington Air Contaminant:
TWA: 800 ppm - 1900 mg

Propane: California Proposition 65 code: -
Delaware Air Quality Management List:
DRQ: F 1000** - RQ State: State requirements differs from Federal
Massachusetts Haz. Substance codes: 2,4,5,6
Minnesota Haz. Substance:
Codes: AP - Ratings: - - Status: Title III
New Jersey RTK Hazardous Substance:
DOT: 1978 - Sub No.: 1594 - TPQ: -
Pennsylvania Haz. Substance code: -
Washington Air Contaminant:
TWA: 1000 ppm - 1800 mg

National regulations - Canada

n-Butane, <0,1% 1,3-Butadiene: DSL: listed
Propane: DSL: listed

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Text for labeling: Contains >= 50 % n-Butane, <0,1% 1,3-Butadiene, 5 - 10 % Propane. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)
Fire: 4 (Severe)
Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)
Flammability: 4 (Severe)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	4
PHYSICAL HAZARD	0
	X

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
AS/NZS: Australian Standards/New Zealand Standards
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
CNS: Central Nervous System
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
EC: European Community
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
Flammable Gas: Flammable gases
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

Reason of change: General revision

Date of first version: 6/18/2018

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.