

1. Product and company identification

Product identifier

Trade name: 633T18 - Cooling Spray

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

General use: Surface treatment agent, for orthopedic procedures.
For use in industrial installations and professional treatment only.

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: gaseous
Form: Aerosol
Color: colorless, clear
Odor: like: Hydrocarbons, aliphatic
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

Refrigerated liquefied gas. Contact with the product can cause cold burns or frostbite. Even after use and until complete evaporation of the flammable components, there is still a danger of an explosive steam-air mixture forming.

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

see section 11: Toxicological information

3. Composition / Information on ingredients

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 106-97-8	Butane	65 - 70 %	Flammable Gas - Category 1. Liquefied Gas.
CAS 74-98-6	Propane	30 - 35 %	Flammable Gas - Category 1. Liquefied Gas.

4. First aid measures

General information:	IF exposed or concerned: Get medical advice/attention. If medical advice is needed, have product container or label at hand.
In case of inhalation:	Move victim to fresh air, put at rest and loosen restrictive clothing. Seek medical aid in case of troubles.
Following skin contact:	Wash with generous amount of water and soap. Take off contaminated clothing and wash it before reuse. Consult physician. Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.
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 the attention of an ophthalmologist immediately.
After swallowing:	Do NOT induce vomiting. Rinse mouth and seek medical attention immediately.

Most important symptoms/effects, acute and delayed

Refrigerated liquefied gas. Contact with the product can cause cold burns or frostbite. Inhaling can lead to irritations of the respiratory tract and mucous membrane. Higher doses may lead to a narcotic effect.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

<= -4 °F

Auto-ignition temperature: No data available

Suitable extinguishing media:

Foam, dry chemical powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Water

Specific hazards arising from the chemical

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

Vapors may form explosive mixtures with air.

May form dangerous gases and vapors in case of fire. Furthermore, there may develop:

Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

Wear self-contained positive pressure breathing apparatus and fire fighter's clothing conforming to European standard EN 469. Do not breathe fumes.

Additional information:

Heating will lead to pressure increase: Danger of bursting and explosion.

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

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

Personal precautions:

Do not breathe spray. Avoid contact with the substance.

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.

Environmental precautions:

Do not allow to enter into ground-water, surface water or drains. Danger of explosion!

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).

Additional information:

Use explosion-proof equipment and non-sparking tools/utensils.

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.

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 and in a well-ventilated place.
Keep container dry. Keep only in the original container.
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 food, drink and animal feedingstuffs.
Do not store together with combustible or self-igniting materials or any highly flammable solids.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
106-97-8	Butane	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.
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: eye glasses with side protection

Skin protection: Wear anti-static footwear and clothing
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Gloves with long cuffs, heat insulating
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

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:

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

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 68 °F and 101.3 kPa: gaseous Form: Aerosol Color: colorless, clear
Odor:	like: Hydrocarbons, aliphatic
Odor threshold:	No data available
pH:	not applicable (-)
Melting point/freezing point:	not applicable
Initial boiling point and boiling range:	<= -4 °F
Flash point/flash point range:	<= -4 °F
Evaporation rate:	not determined (-)
Flammability:	Extremely flammable aerosol.
Explosion limits:	LEL (Lower Explosion Limit): 1.40 Vol-% UEL (Upper Explosive Limit): 9.40 Vol-%
Vapor pressure:	not determined (-)
Vapor density:	not determined (-)
Density:	at 68 °F: 0.56 g/mL (-)
Water solubility:	practically insoluble (-)
Partition coefficient: n-octanol/water:	2.89 log P(o/w) (Butane) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Viscosity, kinematic:	not applicable (-)
Explosive properties:	Product is not explosive. Vapors may form explosive mixtures with air.
Oxidizing characteristics:	not oxidising
Ignition temperature:	548.6 °F

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:	Contains gas under pressure; may explode 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: None known

Hazardous decomposition products:
No known hazardous decomposition products.

Thermal decomposition: No data available

11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

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): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

Skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Other information: Information about Butane:
LC50 Rat, inhalative: 658 mg/L/4h
Information about Propane:
LC50 Rat, inhalative: 20 mg/L/4h

Symptoms

Higher doses may lead to a narcotic effect.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Information about Propane:
Fish toxicity:
LC50: 27.98 mg/L/96h
Algae toxicity:
ErC50 Green algae: 7.71 mg/L/96h

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

Volatile organic compounds (VOC):

100 % by weight / 560 g/L

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

13. Disposal considerations

Product

Recommendation: Special waste. Do not pierce or burn, even after use.
Dispose of waste according to applicable legislation. Do not dispose of with household waste. Do not empty into drains.

Package

Recommendation: Empty carefully and completely, if possible. Non-contaminated packages may be recycled.
Dispose of waste according to applicable legislation.
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

Butane:	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

Butane:	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
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National regulations - Canada

Butane:	DSL: listed
Propane:	DSL: listed

National regulations - Great Britain

Hazchem-Code: -

16. Other information

Text for labeling: Contains 65 - 70 % Butane, 30 - 35 % 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
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
LC50: Median lethal concentration
LEL: Lower Explosion Limit
log P(o/w): Partition coefficient: octanol/water
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: 9/27/2017

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.