

1. 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
 Zip 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 telephone 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. Hazard identification

Classification of the substance or mixture

Flammable Aerosol - Category 1 Extremely flammable aerosol.

Compressed Gas Contains gas under pressure; may explode if heated.

Label elements

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.

Other hazards

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.

3. Composition/information on ingredients

Mixtures

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.

The actual concentration or concentration range is withheld as a trade secret.

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

Suitable (and unsuitable) extinguishing media

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, protective equipment and emergency procedures

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 and material for containment and cleaning up

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

Precautions for safe 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.

Conditions for safe storage, including any incompatibilities

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

Control parameters

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

Appropriate engineering controls

Provide good ventilation and/or an exhaust system in the work area.

Personal protection equipment (PPE)

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.

Hand protection: 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.

Eye protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010: eye glasses with side protection

Body protection: Wear anti-static footwear and clothing

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

Physical state at 68 °F and 101.3 kPa	gaseous
Color:	Form: Aerosol colorless, clear
Odor:	like: Hydrocarbons, aliphatic
Odor threshold:	No data available
Melting point/freezing point:	not applicable
Initial boiling point and boiling range:	<= -4 °F
Flammability:	Extremely flammable aerosol.
Explosion limits:	LEL (Lower Explosion Limit): 1.40 Vol-% UEL (Upper Explosive Limit): 9.40 Vol-%
Flash point/flash point range:	<= -4 °F
Evaporation rate:	not determined (-)
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	not applicable (-)
Viscosity, kinematic:	not applicable (-)
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.
Vapor pressure:	not determined (-)
Density:	at 68 °F: 0.56 g/mL (-)
Vapor density:	not determined (-)
Particle characteristics:	Not applicable

Additional information

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.

11. Toxicological information

Information on toxicological effects

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

Persistence and degradability

Further details: No data available

Bioaccumulative potential

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.

Mobility in soil

No data available

Other adverse effects

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

13. Disposal considerations

Waste treatment methods

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

DOT: UN1950
IMDG, IATA-DGR: UN 1950

UN proper shipping name

DOT, IMDG: UN 1950, AEROSOLS
IATA-DGR: UN 1950, AEROSOLS, FLAMMABLE

Transport hazard class(es)

DOT: 2.1
IMDG: Class 2, Subrisk -, see SP63
IATA-DGR: Class 2.1



Packing group

DOT, IATA-DGR: not applicable
IMDG: -

Environmental hazards

Marine pollutant: no

Transport in bulk according to IMO instruments

No data available

Special precautions for user

USA: Department of Transportation (DOT)

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)

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)

Proper shipping name:	UN 1950, AEROSOLS, FLAMMABLE
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

No data available

Further regulations, limitations and legal requirements

No data available

16. Other information

Text for labeling:	Contains 65 - 70 % Butane, 30 - 35 % Propane.
Revision date:	12/17/2025
Date of first version:	9/27/2017
Reason of change:	General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022 General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)

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:

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
 DOT: Department of Transportation's Safety Regulations (USA)
 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
 TLV: Threshold Limit Value
 TRGS: Technical Rules for Hazardous Substances
 UN: United Nations
 vPvB: Very persistent and very bioaccumulative
 WEL: Workplace Exposure Limit

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.