

1. Product and company identification

Product identifier

Trade name: 633T2 - Teflon-Spray

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

General use: release agent, lubricating agent, lubricant 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: liquid

Form: Aerosol

Color: colorless

Odor: characteristic

Classification: Flammable Aerosol - Category 1. Compressed Gas. Eye Irritation - Category 2A.

Hazard symbols:



Signal word: **Danger**

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

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.
Wash hands and face thoroughly after handling.
Wear protective gloves/protective clothing/eye protection.
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

Potentially explosive mixtures may form if adequate ventilation is not provided.
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

Chemical characterization: Mixture of the substances listed below with non-hazardous additions:

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 67-63-0	Isopropyl alcohol	< 10 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 5593-70-4	Titanium tetrabutanolate	< 3 %	Flammable Liquid - Category 3. Skin Irritation - Category 2. Eye Damage - Category 1.
CAS 106-97-8	Butane	25 - 50 %	Flammable Gas - Category 1. Compressed Gas.
CAS 74-98-6	Propane	25 - 50 %	Flammable Gas - Category 1. Compressed Gas.

4. First aid measures

General information:	If medical advice is needed, have product container or label at hand. First aider: Pay attention to self-protection!
In case of inhalation:	Move victim to fresh air, put at rest and loosen restrictive clothing. 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. In case of skin reactions, consult a physician.
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. Subsequently consult an ophthalmologist.
After swallowing:	Do not induce vomiting. Rinse mouth and seek medical attention immediately.

Most important symptoms/effects, acute and delayed

Causes serious eye irritation.

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:

-142.6 °F

Auto-ignition temperature: not self-igniting

Suitable extinguishing media:

Carbon dioxide, dry chemical powder, sand

Extinguishing media which must not be used for safety reasons:

Water

Specific hazards arising from the chemical

Extremely flammable aerosol. Pressurised container: May burst if heated.

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

Protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus.

Additional information:

Use fine water spray to cool endangered containers.

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

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 soil, sewage, water bodies, lower level rooms or pits.

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. Never use water.

Additional information:

Keep away from sources of ignition and heat.

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. When handling large quantities, supply emergency spray.

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.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
67-63-0	Isopropyl alcohol	USA: ACGIH: STEL	984 mg/m ³ ; 400 ppm
		USA: ACGIH: TWA	492 mg/m ³ ; 200 ppm
		USA: IDLH: TWA	2,000 ppm [10% LEL]
		USA: NIOSH: STEL	1,225 mg/m ³ ; 500 ppm
		USA: NIOSH: TWA	980 mg/m ³ ; 400 ppm
		USA: OSHA: TWA	980 mg/m ³ ; 400 ppm
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

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
67-63-0	Isopropyl alcohol	USA: ACGIH-BEI, urine	40 mg/L	Acetone in urine	end of shift at end of work week

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.

Skin protection: Wear suitable protective clothing.
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
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.

General hygiene considerations:
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.
When handling large quantities, supply emergency spray.

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: liquid
Form: Aerosol
Color: colorless

Odor: characteristic

Odor threshold: No data available

pH: No data available

Melting point/freezing point: not determined

Initial boiling point and boiling range: -47.2 °F

Flash point/flash point range: -142.6 °F

Evaporation rate: No data available

Flammability: Extremely flammable aerosol.

Explosion limits: LEL (Lower Explosion Limit): 1.50 Vol-%
UEL (Upper Explosive Limit): 10.90 Vol-%

Vapor pressure: at 68 °F: 8,300 hPa

Vapor density: No data available

Density: 1 g/mL

Solubility: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: not self-igniting

Thermal decomposition: No data available

Ignition temperature: > 689 °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:

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:

Strong oxidizing agents, strong acids.

Hazardous decomposition products:

Highly flammable gases

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: Eye Irritation - Category 2A = Causes serious eye irritation.

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 Isopropyl alcohol:
 LD50 Rat, oral: 4,570 mg/kg
 LD50 Rabbit, dermal: 13,400 mg/kg
 LC50 Rat, inhalative: 30 mg/L/4h

Information about Titanium tetrabutanolate:
 LD50 Rat, oral: 3,122 mg/kg

Information about Butane:
 LC50 Rat, inhalative: 658 mg/L/4h

For carcinogenic effects:
 Information about Isopropyl alcohol:
 IARC Rating: Group 3
 OSHA Carcinogen: not listed
 NTP Rating: not listed

Symptoms

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

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Information about Isopropyl alcohol:
 Fish toxicity:
 LC50 Pimephales promelas (fathead minnow): 9,640 mg/L/96h
 Daphnia toxicity:
 EC50 Daphnia magna (Big water flea): 9,714 mg/L/24h

Mobility in soil

No data available

Persistence and degradability

Further details: Not easily bio-degradable.

Additional ecological information

Volatile organic compounds (VOC):
 96.63 % by weight / 966.3 g/L

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.

Package

Recommendation: Handle empty containers with care. Incineration may cause explosion.
 Dispose of waste according to applicable legislation.

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

Isopropyl alcohol:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status:</p> <p>IARC Rating: Group 3</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0359</p>
Titanium tetrabutanolate:	TSCA Inventory: listed
Butane:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0068*</p>
Propane:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0524</p>

National regulations - U.S. State Regulations

Isopropyl alcohol:	<p>Idaho Air Pollutant List:</p> <p>Title 585: AAC: 49 -- EL: 65.3 -- WEL: 980 -Title 586: -</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6 F9</p> <p>Minnesota Haz. Substance:</p> <p>Codes: ANO -- Ratings: 7.84 -- Status: Title III. TRI.</p> <p>New Jersey RTK Hazardous Substance:</p> <p>DOT: 1219 - Sub No.: 1076 - TPQ: -</p> <p>Pennsylvania Haz. Substance code: E</p> <p>Washington Air Contaminant:</p> <p>TWA: 400 ppm - 980 mg -- STEL: 500 ppm - 1225 mg</p>
Propane:	<p>California Proposition 65 code: -</p> <p>Delaware Air Quality Management List:</p> <p>DRQ: F 1000** - RQ State: State requirements differs from Federal</p> <p>Massachusetts Haz. Substance codes: 2,4,5,6</p> <p>Minnesota Haz. Substance:</p> <p>Codes: AP - Ratings: - - Status: Title III</p> <p>New Jersey RTK Hazardous Substance:</p> <p>DOT: 1978 - Sub No.: 1594 - TPQ: -</p> <p>Pennsylvania Haz. Substance code: -</p> <p>Washington Air Contaminant:</p> <p>TWA: 1000 ppm - 1800 mg</p>

16. Other information

Text for labeling:	Contains < 10 % Isopropyl alcohol, < 3 % Titanium tetrabutanolate, 25 - 50 % Butane, 25 - 50 % Propane. Safety data sheet available on request.
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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
 EC50: Effective Concentration 50%
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
 EN: European Standard
 EQ: Excepted quantities
 Eye Damage: Eye damage
 Eye Irritation: Eye irritation
 Flammable Gas: Flammable gases
 Flammable Liquid: Flammable liquid
 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
 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
 Skin Irritation: Skin irritation
 STOT SE: Specific target organ toxicity - single exposure
 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: 12/31/2020

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.