

1 Identification

Product identifier

Trade name: 634A81 - Silicone Fluid

Recommended use and restrictions on use

General use: Product for orthopedic procedures.
Reserved for industrial and professional use.

Initial supplier identifier

Company name: Otto Bock HealthCare Canada Ltd.

Street/POB-No.: 5470 Harvester Road

Postal code, city: Burlington, ON L7L 5N5, CA
Canada

WWW: www.ottobock.ca

Email: info.canada@ottobock.com

Telephone: (800) 665-3327

Telefax: (800) 463-3659

Department responsible for information:

Mark Agro, Telephone: (800) 665-3327 (9 am - 5 pm)

Additional information:

Corporate headquarters:
Ottobock SE & Co. KGaA
Max-Näder-Straße 15
Duderstadt
Germany

Emergency telephone number

COLLECT, Telephone: (613) 996-6666

Transport:

CONSULTANK Lutz Harder GmbH (Contract QUALI003)

Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2 Hazard identification

Classification

Flammable Liquid 2 Highly flammable liquid and vapour.

Aquatic toxicity - acute 1 Very toxic to aquatic life.

Aquatic toxicity - chronic 2 Toxic to aquatic life with long lasting effects.

Information elements

Symbols:



Signal word:

Danger

Hazard statements:

Highly flammable liquid and vapour.
Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Avoid release to the environment.
Collect spillage.

Other hazards known to the supplier with respect to the product

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 have a narcotic effect. May become electrostatically charged. Special danger of slipping by leaking/spilling product.

3 Composition/Information on ingredients

Material/substance

Chemical name: C6 H18 O Si2
Hexamethyldisiloxane, HMDS 90 % - 100 %
CAS-Number: 107-46-0

4 First-aid measures

Description of necessary first-aid measures

General information: If medical advice is needed, have product container or label at hand. Take off contaminated clothing and wash it before reuse.

In case of inhalation: Provide fresh air. If you feel unwell, seek medical advice.

In case of swallowing: Rinse mouth with water.
Never give an unconscious person anything through the mouth.
Do not induce vomiting.
If you feel unwell, seek medical advice.

In case of skin contact: Remove mechanically with cloth or paper. Thoroughly wash skin with soap and water.
Consult a doctor if skin irritation persists.

In case of 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. In case of troubles or persistent symptoms, consult an ophthalmologist.

Most important symptoms and effects, whether acute or delayed

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

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

5 Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, extinguishing powder, carbon dioxide.

Unsuitable extinguishing media:

Full water jet

Specific hazards arising from the product

Highly flammable liquid and vapour.

Air combined with vapours may form potentially explosive mixtures that are heavier than air. vapours may proceed on the ground over great distances and cause fire and backflashes.

In case of fire may be liberated: silicon dioxide, traces of incompletely burned carbon compounds, formaldehyde, carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Heating will lead to pressure increase: danger of bursting and explosion. Use fine water spray to cool endangered containers.

Move undamaged containers from immediate hazard area if it can be done safely.

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 vapours. 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.

Cordon off downwind area at risk and warn inhabitants.

Environmental precautions:

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

In case of release, notify competent authorities.

Methods and material for containment and cleaning 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).

Beware of reignition. Thoroughly clean surrounding area.

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

Additional information:

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

Special danger of slipping by leaking/spilling product.

7 Handling and storage

Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.
Wear suitable protective clothing.
Avoid contact with skin and eyes.
Do not breathe vapour/aerosol. The use of local exhaust ventilation is recommended.
Do not eat, drink or smoke when using this product.
Take off contaminated clothing and wash it before reuse. Wash hands and face thoroughly after handling.
When handling large quantities, supply emergency spray.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.
Use only explosion-protected equipment/instruments. Do not weld.
In partially filled containers explosive mixtures may form.

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 heat and direct sunlight.
Store containers in upright position. Explosion protection required.

Hints on joint storage:

Do not store together with combustible or self-igniting materials or any highly flammable solids. Keep away from food, drink and animal feedingstuffs. Keep away from: strong oxidizing agents, Organic peroxides, Flammable solids, pyrophoric liquids and solids, Gases, Substances which, in contact with water, emit flammable gases, explosive(s).

Further details:

Measurements taken at temperatures exceeding 150 °C have revealed that a small quantity of formaldehyde splits off through oxidative decomposition.
Formaldehyde: Toxic by inhalation, in contact with skin and if swallowed. Corrosive. May cause sensitization by skin contact. Limited evidence of a carcinogenic effect.

8 Exposure controls/Personal protection

Control parameters

Appropriate engineering controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.

Individual protection measures, such as personal protective equipment

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use combination filter type A/P2 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

Hand protection:

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: butyl caoutchouc (butyl rubber), neoprene, nitrile rubber, ethylene vinyl alcohol laminate (EVAL), polyvinyl alcohol, polyvinyl chloride, fluoro rubber
Layer thickness: > 0.35 mm
Breakthrough time: > 120 min
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.

Body protection: Flame retardant, antistatic and chemical resistant protective clothing.

General hygiene considerations:
 Take off contaminated clothing and wash it before reuse. Use only non-sparking tools.
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Do not breathe vapour/aerosol. Avoid contact with skin and eyes.
 When using do not eat, drink or smoke.
 Wash hands before breaks and after work.
 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

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	colourless
Odour:	nearly odourless
Odour threshold:	No data available
Melting point and freezing point:	No data available
Boiling point or initial boiling point and boiling range:	> 35 °C
Flammability:	No data available
Lower and upper explosion limit or lower and upper flammability limit:	LEL (Lower Explosion Limit): 1,5 % UEL (Upper Explosive Limit): 14,65 %
Flash point/flash point range:	-3.3 °C (c.c.)
Evaporation rate:	No data available
Auto-ignition temperature:	352 °C
Decomposition temperature:	150 °C
pH:	No data available
Kinematic viscosity:	at 25 °C: 0.65 mm ² /s (DIN 53018)
Dynamic viscosity:	at 25 °C: 0.5 mPa*s (DIN 51562)
Water solubility:	at 23 °C: 0.930 mg/L
Partition coefficient — n-octanol/water:	at 25 °C: 4.20 log P(o/w) Based on the n-octanol/water partition coefficient accumulation in organisms is possible.
Vapour pressure:	at 20 °C: 43 hPa at 25 °C: 55 hPa at 50 °C: 175 hPa
Density and/or relative density	at 25 °C: 0.760 g/mL (DIN 51757)
Vapour density:	No data available
Particle characteristics:	Not applicable

Additional information

Explosive properties: vapours may form explosive mixtures with air.

Ignition temperature: 340 °C (DIN 51794)
Molecular weight: 162 g/mol
Additional information: Relative vapour density (air=1): 5,6
Evaporation rate (butyl acetate =1): >1.

10 Stability and reactivity

Reactivity: Highly flammable liquid and vapour. vapours may form explosive mixtures with air.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:
Electrostatic charge

Conditions to avoid: Keep away from heat sources, sparks and open flames.
Protect from direct sunlight.

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products:
formaldehyde.

11 Toxicological information

Information on the likely routes of exposure

No data available

Health hazard information

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.
mild irritant

Species Rabbit: 500 mg/24h

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

Species Rabbit

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.

gene-mutations mammalian cells: not a mutagen

chromosomal aberrations mammalian cells: not a mutagen
not mutagenic in bacterial mutagenicity

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

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Acute toxicity:

LD50 Rat, oral: > 5,000 mg/kg

LC50 Rat, inhalative: approx. 106 mg/L/4h (OECD 403)

LD50 Rabbit, dermal: > 2,000 mg/kg

Other information:

Measurements taken at temperatures exceeding 150 °C have revealed that a small quantity of formaldehyde splits off through oxidative decomposition.

Formaldehyde: Toxic by inhalation, in contact with skin and if swallowed. Corrosive. May cause sensitization by skin contact. Limited evidence of a carcinogenic effect.

12 Ecological information

Ecotoxicity

Aquatic toxicity: Very toxic to aquatic life with long lasting effects.
Algae toxicity:
EC50 Selenastrum capricornutum (green algae), growth rate: > 0.55 mg/L/72h (OECD 201)
Daphnia toxicity:
NOEC Daphnia magna (Big water flea): 0.1 mg/L/21d
Fish toxicity:
LC50 Oncorhynchus mykiss: 0.46 mg/L/96h

Persistence and degradability

Further details: Biodegradability: 2 %/28 d (OECD 301 C), not easily bio-degradable

Bioaccumulative potential

Bioconcentration factor (BCF):
1300

Mobility in soil

No data available

Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

13 Disposal considerations

Waste treatment methods

Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.

Package

Recommendation: Handle empty containers with care. Incineration may cause explosion.
Residual substance emptied and rinsed clean. Do not re-use the empty container.
Dispose of waste according to applicable legislation.

14 Transport information

UN number

TDG: UN1993
IMDG, IATA-DGR: UN 1993

UN proper shipping name

TDG: UN 1993, Flammable liquid, n.o.s. (Hexamethyldisiloxane)
IMDG, IATA-DGR: UN 1993, FLAMMABLE LIQUID, N.O.S. (Hexamethyldisiloxane)

Transport hazard class

TDG: 3
IMDG: Class 3, Subrisk -
IATA-DGR: Class 3



Packing group

TDG, IMDG, IATA-DGR: II



Environmental hazards

Marine pollutant: yes

Special precautions in connection with transport or conveyance either within or outside the premises

Canada: Transportation of Dangerous Goods (TDG)

Special Provisions: 16, 150
Explosive limit and limited quantity index: 1 L
Passenger carrying road or rail index: 5 L
Marine pollutant: P

Sea transport (IMDG)

EmS: F-E, S-E
Special Provisions: 274
Limited quantities: 1 L
Excepted quantities: E2
Package - Instructions: P001
Package - Provisions: -
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T7
Tank instructions - Provisions: TP1, TP8, TP28
Stowage and handling: Category B.
Properties and observations: -
Marine pollutant: yes
Segregation group: none

Air transport (IATA)

Proper shipping name: UN 1993, FLAMMABLE LIQUID, N.O.S. (Hexamethyldisiloxane)
Hazard label: Flamm. liquid
Excepted Quantity Code: E2
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special Provisions: A3
Emergency Response Guide-Code (ERG): 3H

15 Regulatory information

National regulations - Canada

DSL: listed

Further regulations, limitations and legal requirements

No data available

16 Other information

Revision date: 17/12/2025
Date of first version: 25/10/2012
Reason of change: General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022

Abbreviations and acronyms:

Aquatic toxicity - acute: Hazardous to the aquatic environment - acute
Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
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
DSL: Domestic Substances List
EC: European Community
EC50: Effective Concentration 50%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
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
log P(o/w): Partition coefficient: octanol/water
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
TDG: Transportation of Dangerous Goods Regulation in Canada
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.