

1. Identification

Product identifier

Trade name: 634A80 - SuperSkin Cleaner

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

General use: Solvents
For commercial user 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 Liquid - Category 2

Acute Toxicity - oral - Category 4

Eye Irritation - Category 2A

Carcinogenicity - Category 2

Specific Target Organ Toxicity (Single Exposure) - Category 3

Highly flammable liquid and vapor.

Harmful if swallowed.

Causes serious eye irritation.

Suspected of causing cancer.

May cause respiratory irritation. May cause drowsiness or dizziness.

Label elements

Symbols:



Signal word:

Danger

Hazard statements:

- Highly flammable liquid and vapor.
- Harmful if swallowed.
- Causes serious eye irritation.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
- Suspected of causing cancer.

Precautionary statements:

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid breathing mist/vapors/spray.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Call a POISON CENTER/doctor if you feel unwell.
- In case of fire: Use dry powder, foam or water spray for extinction.
- Store in a well-ventilated place. Keep cool.
- Dispose of contents/container to hazardous or special waste collection point.

Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided. May form explosive peroxides.
Special danger of slipping by leaking/spilling product.

3. Composition/information on ingredients

Substances

Chemical characterization: $C_4H_8O = (CH_2)_3-CH_2O$
THF, Tetrahydrofurane

CAS-Number: 109-99-9

Additional information: Contains Inhibitor (3,5-Di-tert-butyl-4-hydroxytoluene, CAS 128-37-0: ≥ 200 ppm).

4. First aid measures

General information: First aider: Pay attention to self-protection! 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: Move victim to fresh air, put at rest and loosen restrictive clothing. If victim is at risk of losing consciousness, position and transport on their side. If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. Seek medical attention.

Following skin contact: Thoroughly wash skin with soap and 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: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

Causes serious eye irritation.

May cause respiratory irritation. May cause drowsiness or dizziness.

Harmful if swallowed.

Other symptoms: Shortage of breath, headache, dizziness, fever

Information to physician

Treat symptomatically.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, dry chemical powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Highly flammable liquid and vapor. Vapors form potentially explosive mixtures with air, which are heavier than air. Air-Vapor mixture may travel great distances at floor level and lead to backflash when exposed to an ignition source.

Furthermore, there may develop: Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters

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. Keep containers cool with water spray.

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

Avoid exposure. Avoid breathing mist/vapors/spray. Avoid contact with the substance.

Eliminate all ignition sources if safe to do so. If possible, eliminate leakage. 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 drains, surface waters, basements or pits. Danger of explosion! If necessary, notify appropriate authorities.

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).

Beware of reignition. Thoroughly clean surrounding area.

In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Never return spills in original containers for re-use.

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: Obtain special instructions before use.

Provide adequate ventilation, and local exhaust as needed. Provide room air exhaust at ground level. Avoid breathing mist/vapors/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.

Work place should be equipped with a shower and an eye rinsing apparatus.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Use only explosion-protected equipment/instruments. Do not weld.

In partially filled containers explosive mixtures may form.

With air: May form explosive peroxides.

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.

Avoid: Access of air and oxygen (Peroxide formation!)

Hints on joint storage: Do not store together with: strong oxidizing agents, acids.

Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

Type	Limit value
USA: ACGIH: STEL	295 mg/m ³ ; 100 ppm (may be absorbed through the skin)
USA: ACGIH: TWA	147 mg/m ³ ; 50 ppm (may be absorbed through the skin)
USA: IDLH: TWA	2,000 ppm [10% LEL]
USA: NIOSH: STEL	735 mg/m ³ ; 250 ppm
USA: NIOSH: TWA	590 mg/m ³ ; 200 ppm
USA: OSHA: TWA	590 mg/m ³ ; 200 ppm

Biological limit values:

Type	Limit value	Parameter	Material	Time of sampling
USA: ACGIH-BEI	2 mg/L	Tetrahydrofuran	urine	end of exposure or end of shift

Appropriate engineering controls

Provide good ventilation and/or an exhaust system in the work area. The substance should only be handled in closed apparatus or systems. Explosion protection required.

Personal protection equipment (PPE)

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

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, closed-circuit breathing apparatus must be used!

Hand protection: protective gloves according to OSHA Standard - 29 CFR: 1910.138, solvent resistant
Glove material: polyethylene
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Unsuitable glove material: Fluororubber (Viton), nitrile rubber (latex), butyl caoutchouc (butyl rubber), PVC, natural rubber (Caoutchouc)

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

Body protection: Solvent-resistant protective clothing. In case of handling larger quantities: Flame-retardant protective clothing

General hygiene considerations:

Obtain special instructions before use.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid breathing mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Take off contaminated clothing and wash it before reuse.

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Work place should be equipped with a shower and an eye rinsing apparatus.

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	liquid
Color:	colorless
Odor:	essential
Odor threshold:	No data available
Melting point/freezing point:	-163.3 °F
Initial boiling point and boiling range:	149.9 °F
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 2.00 Vol-% UEL (Upper Explosive Limit): 11.00 Vol-%
Flash point/flash point range:	-5.8 °F
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	Not determined
pH:	7
Viscosity:	No data available
Water solubility:	at 68 °F: completely miscible
Partition coefficient: n-octanol/water:	at 77 °F: 0.46 log K(o/w) (OECD 107) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Vapor pressure:	at 68 °F: 170 hPa
Density:	at 68 °F: 0.887 g/mL
Vapor density:	No data available
Particle characteristics:	Not applicable

Additional information

Explosive properties:	May form explosive peroxides. In use, may form flammable/explosive vapor-air mixture.
Ignition temperature:	419 °F
Molecular weight	72.12 g/mol

10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapor. May form explosive peroxides.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	In use, may form flammable/explosive vapor-air mixture. Heating will lead to pressure increase: danger of bursting and explosion.
Conditions to avoid:	Protect from heat and direct sunlight. Due to the high vapor pressure, bursting danger to containers/vessels when temperature increases. Avoid shock and friction.
Incompatible materials:	Strong oxidizing agents, acids, oxygen, Air

Hazardous decomposition products:

No decomposition when used properly.

11. Toxicological information

Information on toxicological effects

Acute toxicity: LD50 Rat, oral: 1,650 mg/kg
 LD50 Rat, dermal: > 2,000 mg/kg (OECD 402)
 LC50 Rat, inhalative (vapor): > 14.7 mg/L/6h

Toxicological effects: Acute toxicity (oral): Acute Toxicity - oral - Category 4 = Harmful if swallowed.
 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.
 No mortality occurred
 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: Carcinogenicity - Category 2 = Suspected of causing cancer.
 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): Specific Target Organ Toxicity (Single Exposure) -
 Category 3 = May cause respiratory irritation. May cause drowsiness or dizziness.
 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.

Symptoms

In case of inhalation:
 Inhaling can lead to irritations of the respiratory tract and mucous membrane.
 Higher doses may lead to a narcotic effect.
 In case of ingestion:
 Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
 After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Fish toxicity:

LC50 Pimephales promelas (fathead minnow): 2,160 mg/L/96h

NOEC Pimephales promelas (fathead minnow): 216 mg/L/33d

LOEC Pimephales promelas (fathead minnow): 367 mg/L/33d

Daphnia toxicity:

LC50 Daphnia magna (Big water flea): 3,485 mg/L/48h

Algae toxicity:

NOEC Scenedesmus quadricauda: 3,700 mg/L/8d

Effects in sewage plants: IC50 activated sludge: 460 mg/L

Persistence and degradability

Further details:

Biodegradability:

Oxygen consumption: 39%/28d (OECD 301 D)

Product is not readily biodegradable. Evidence for inherent biodegradability.

Bioaccumulative potential

Significant bioaccumulation potential is not to be expected.

Partition coefficient: n-octanol/water:

at 77 °F: 0.46 log K(o/w) (OECD 107)

Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

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 according to applicable local, state and federal regulations.

Do not dispose of with household waste.

Package

Recommendation: Dispose of waste according to applicable legislation.

Recommended cleansing agent: Water

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

Empty carefully and completely, if possible. Handle empty containers with care.

Incineration may cause explosion.

14. Transport information

UN number

DOT: UN2056
IMDG, IATA-DGR: UN 2056

UN proper shipping name

DOT, IMDG, IATA-DGR: UN 2056, TETRAHYDROFURAN

Transport hazard class(es)

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



Packing group

DOT, IMDG, IATA-DGR: II

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: 3
Special Provisions: IB2, T4, TP1
Packaging – Exceptions: 150
Packaging – Non-bulk: 202
Packaging – Bulk: 242
Quantity limitations – Passenger aircraft / rail: 5 L
Quantity limitations – Cargo only: 60 L
Vessel stowage – Location: B

Sea transport (IMDG)

EmS: F-E, S-D
Special Provisions: -
Limited quantities: 1 L
Excepted quantities: E2
Package - Instructions: P001
Package - Provisions: -
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP1
Stowage and handling: Category B.
Properties and observations: Colourless liquid with an ethereal odour. Flashpoint: below - 18°C c.c.
Explosive limits: 1.5% to 12%. Miscible with water.
Marine pollutant: no
Segregation group: none

Air transport (IATA)

Proper shipping name:	UN 2056, TETRAHYDROFURAN
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
Emergency Response Guide-Code (ERG):	3H

15. Regulatory information

National regulations - U.S. Federal Regulations

TSCA Inventory: listed
 Clean Air Act:
 CAA SOCM Chemical: yes
 Other Environmental Laws:
 CERCLA: RQ 1000 lbs.
 NIOSH Recommendations:
 Occupational Health Guideline: 0602

National regulations - U.S. State Regulations

New York Right-To-Know: listed
 Delaware Air Quality Management List:
 DRQ: 1000 - RQ State: Federal Regulations Apply
 Idaho Air Pollutant List:
 Title 585 - AAC: 29.5 - EL: 39.3 - WEL: 590 - Title 586 -
 Massachusetts Haz. Substance codes: 2,4,5,6 F8
 Minnesota Haz. Substance:
 Codes: AO, Ratings: -, Status: Title III.
 New York List of Hazardous Substances:
 RQ -- Air: 1000 - RQ -- Land: 100 - Note: No Note Associated with this chemical.
 Pennsylvania Haz. Substance code: E
 Washington Air Contaminant:
 TWA: 200 ppm / 590 mg - STEL: 250 ppm / 735 mg

Further regulations, limitations and legal requirements

No data available

16. Other information

Text for labeling:	Contains 100 % Tetrahydrofuran.
Revision date:	11/28/2025
Date of first version:	10/7/1994
Reason of change:	General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 3 (Serious)

Reactivity: 1 (Slight)

HMIS Version III Rating:

Health: 2 (Moderate) - Chronic effects

Flammability: 3 (Serious)

Physical Hazard: 1 (Slight)

Personal Protection: X = Consult your supervisor

HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		1
		X

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity
AS/NZS: Australian Standards/New Zealand Standards
Carcinogenicity: Carcinogenicity
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
Eye Irritation: Eye irritation
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
IC50: Inhibition Concentration 50%
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
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
PVC: Polyvinyl chloride
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
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

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.