

1. Product and company identification

Product identifier

Trade name: 634A58 - Isopropylalcohol

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

General use: Solvent.
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
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
Color: Clear
Odor: Alcoholic
Classification: Flammable Liquid - Category 2. Eye Irritation - Category 2A.
Specific Target Organ Toxicity (Single Exposure) - Category 3.

Hazard symbols:



Signal word:

Danger

Hazard statements:

Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 Avoid breathing vapors.
 Wear protective gloves and eye protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a POISON CENTER/doctor if you feel unwell.
 In case of fire: Use dry powder, foam or carbon dioxide for extinction.
 Store in a well-ventilated place. Keep container tightly closed.

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.
 Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
 Special danger of slipping by leaking/spilling product.
 see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Isopropyl alcohol
CH3-CH(OH)CH3

CAS-Number: 67-63-0

RTECS-Number: -

4. First aid measures

General information: First aider: Pay attention to self-protection!
 Take off immediately all contaminated clothing and wash it before reuse.
 If medical advice is needed, have product container or label at hand.

In case of inhalation: Remove person to fresh air and keep comfortable for breathing. Seek medical attention if problems persist.

Following skin contact: Wash with plenty of water/soap. If skin irritation or rash occurs: Get medical 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. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water.
 Never give anything by mouth to an unconscious person.
 Do not induce vomiting. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

May cause drowsiness or dizziness.
 Causes serious eye irritation.
 Higher doses may lead to a narcotic effect.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

53.6 °F

Auto-ignition temperature: No data available

Suitable extinguishing media:

Water spray jet, dry chemical powder, alcohol resistant foam, 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.

Air combined with vapors may form potentially explosive mixtures that are heavier than air.

Vapors may proceed on the ground over great distances and cause fire and backflashes.

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

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

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

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

Suppress gases/vapors/mists with water spray jet.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Keep containers cool with water spray.

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:

Avoid breathing vapors. 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.

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 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).

Additional information:

Special danger of slipping by leaking/spilling product.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid breathing vapors. 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 immediately all 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.

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 heat and direct sunlight.
Store containers in upright position.

Hints on joint storage:

Do not store together with: Strong oxidizing agents, strong acids, amines, alkalis and aldehydes
Keep away from food, drink and animal feedingstuffs.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

Type	Limit value
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

Biological limit values:

Type	Limit value	Parameter	Material	Time of sampling
USA: ACGIH-BEI	40 mg/L	Acetone in urine	urine	end of shift at end of work week

Engineering controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.
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:	Flame retardant, antistatic and chemical resistant protective clothing. Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: nitrile rubber or butyl caoutchouc (butyl rubber) Layer thickness: ≥ 0.5 mm Breakthrough time: ≥ 480 min Permeation level: ≥ 6 Observe glove manufacturer's instructions concerning penetrability and breakthrough time.
Respiratory protection:	In case of inadequate ventilation wear 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. Avoid breathing vapors. Do not get in eyes, on skin, or on clothing. Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. When using do not eat or drink. 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

Appearance:	Physical state at 68 °F and 101.3 kPa: liquid Color: Clear
Odor:	Alcoholic
Odor threshold:	No data available
pH:	Not determined
Melting point/freezing point:	-129.1 °F
Initial boiling point and boiling range:	179.6 °F
Flash point/flash point range:	53.6 °F
Evaporation rate:	No data available
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 2.00 Vol-% UEL (Upper Explosive Limit): 12.00 Vol-%
Vapor pressure:	at 68 °F: 48 hPa
Vapor density:	No data available
Density:	at 68 °F: 0.785 g/mL
Water solubility:	Completely miscible

Partition coefficient: n-octanol/water:	0.05 log P(o/w) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Viscosity, dynamic:	at 68 °F: 2 mPa*s
Viscosity, kinematic:	Not determined
Explosive properties:	Not explosive. Vapors may form explosive mixtures with air.
Oxidizing characteristics:	Completely miscible
Ignition temperature:	797 °F

10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapor.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Vapors may form explosive mixtures with air. Heating will lead to pressure increase: Danger of bursting and explosion.
Conditions to avoid:	Keep away from heat sources, sparks and open flames. Protect from direct sunlight.
Incompatible materials:	Strong oxidizing agents, strong acid, amines, alkalis and aldehydes
Hazardous decomposition products:	No decomposition when used properly.
Thermal decomposition:	No data available

11. Toxicological information

Toxicological tests

Acute toxicity:	LD50 Rat, oral: 5,840 mg/kg bw (OECD 401)
	LD50 Rabbit, dermal: 13,400 mg/kg bw (OECD 402)
	LC50 Rat, inhalative: > 20 mg/L/4h (OECD 403)

Toxicological effects:

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: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = 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

Headache, dizziness, nausea
In case of ingestion: if swallowed or in the event of vomiting, risk of entering the lungs.

General remarks

For carcinogenic effects:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed

12. Ecological information

Ecotoxicity

Aquatic toxicity: Fish toxicity:
LC50: 9.640mg/L/96h (OECD 203)
Algae toxicity: LC50: > 10,000mg/L/24h (OECD 202)

Mobility in soil

If product enters soil, it will be mobile and may contaminate groundwater.

Persistence and degradability

Further details: Product is readily biodegradable.

Additional ecological information

Volatile organic compounds (VOC):

100 % by weight

General information:

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

13. Disposal considerations

Product

Recommendation: Recycling or special waste incineration.
Do not dispose of with household waste.

Package

Recommendation: Handle empty containers with care. Incineration may cause explosion.
Dispose of waste according to applicable legislation.
Handle contaminated packages in the same way as the substance itself.
Non-contaminated packages may be recycled.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

UN 1219

UN proper shipping name

ADR/RID, IMDG: UN 1219, ISOPROPANOL (ISOPROPYL ALCOHOL)

IATA-DGR: UN 1219, ISOPROPANOL

Transport hazard class(es)

ADR/RID: Class 3, Code: F1

IMDG: Class 3, Subrisk -

IATA-DGR: Class 3



Packing group

ADR/RID, IMDG, IATA-DGR:

II

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: UN1219
Proper shipping name: UN 1219, ISOPROPANOL or ISOPROPYL ALCOHOL
Hazard class or Division: 3
Packing Group: II
Labels: 3
Special Provisions: IB2, T4, TP1
Packaging – Exceptions: 4b, 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)

UN number: UN 1219
Proper shipping name: UN 1219, ISOPROPANOL (ISOPROPYL ALCOHOL)
Class or division, Subsidiary risk: Class 3, Subrisk -
Packing Group: II
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, mobile liquid. Flashpoint: 12°C c.c. Explosive limits: 2% to 12%. Miscible with water.
Marine pollutant: no
Segregation group: none

Air transport (IATA)

UN/ID number: UN 1219
Proper shipping name: UN 1219, ISOPROPANOL
Class or division, Subsidiary risk: Class 3
Packing Group: II
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: A180
Emergency Response Guide-Code (ERG): 3L

15. Regulatory information

National regulations - U.S. Federal Regulations

TSCA Inventory: listed
Carcinogen Status:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed
NIOSH Recommendations:
Occupational Health Guideline: 0359

National regulations - U.S. State Regulations

Idaho Air Pollutant List:

Title 585: AAC: 49 -- EL: 65.3 -- WEL: 980 -Title 586: -

Massachusetts Haz. Substance codes: 2,4,5,6 F9

Minnesota Haz. Substance:

Codes: ANO -- Ratings: 7.84 -- Status: Title III. TRI.

New Jersey RTK Hazardous Substance:

DOT: 1219 - Sub No.: 1076 - TPQ: -

Pennsylvania Haz. Substance code: E

Washington Air Contaminant:

TWA: 400 ppm - 980 mg -- STEL: 500 ppm - 1225 mg

Idaho Air Pollutant List:

Title 585: AAC: 49 -- EL: 65.3 -- WEL: 980 -Title 586: -

Massachusetts Haz. Substance codes: 2,4,5,6 F9

Minnesota Haz. Substance:

Codes: ANO -- Ratings: 7.84 -- Status: Title III. TRI.

New Jersey RTK Hazardous Substance:

DOT: 1219 - Sub No.: 1076 - TPQ: -

Pennsylvania Haz. Substance code: E

Washington Air Contaminant:

TWA: 400 ppm - 980 mg -- STEL: 500 ppm - 1225 mg

National regulations - Great Britain

Hazchem-Code: •2YE

16. Other information

Text for labeling:

Hazard rating systems:



Contains 100 % Isopropyl alcohol. Safety data sheet available on request.

NFPA Hazard Rating:

Health: 1 (Slight)

Fire: 3 (Serious)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 3 (Serious)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

JT Baker Storage Color Code: Red (Flammable Hazard)

HEALTH	1
FLAMMABILITY	3
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
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
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
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
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
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: **Changes in section 8: Occupational exposure limit values**
General revision

Date of first version: **1/22/2019**

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.