

1. Identification

Product identifier

Trade name: 635L24 - 3D-Scanning Spray AESUB white

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

General use: Spray for pre-treatment of surfaces for orthopedic procedures

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

Aerosol - Category 1 Extremely flammable aerosol. Pressurised container: May burst if heated.
Aquatic toxicity - acute - Category 3 Harmful to aquatic life.

Label elements

Symbols:



Signal word: **Danger**

Hazard statements: Extremely flammable aerosol.
Pressurised container: May burst if heated.
Harmful to aquatic life.

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.
Avoid release to the environment.

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Dispose of contents/container to hazardous or special waste collection point.

Other hazards

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.

3. Composition/information on ingredients

Mixtures

Chemical characterization: Blend of active ingredients with propellant

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 64-17-5	Ethanol	10 - 25 %	Flammable Liquid - Category 2. Eye Irritation - Category 2.
CAS 106-97-8	Butane	50 - 75 %	Flammable Gas - Category 1A. Liquefied Gas. Aquatic toxicity - acute - Category 3.
CAS 74-98-6	Propane	10 - 25 %	Flammable Gas - Category 1A. Liquefied Gas. Aquatic toxicity - acute - Category 3.
CAS 75-28-5	Isobutane	1 - 5 %	Flammable Gas - Category 1A. Liquefied Gas. Aquatic toxicity - acute - Category 3.

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

4. First aid measures

General information:	If medical advice is needed, have product container or label at hand. Take off immediately all contaminated clothing and wash it before reuse.
In case of inhalation:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.
Following skin contact:	Remove residues 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. In case of eye irritation consult an ophthalmologist.
After swallowing:	Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

Most important symptoms/effects, acute and delayed

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:

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

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Extremely flammable aerosol. Vapors may proceed on the ground over great distances and cause fire and backflashes. In case of insufficient ventilation and/or when used, may form explosive/highly flammable vapor-air mixture.

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 full firefighting protective clothing.

Additional information:

Do not inhale explosion and combustion gases. Use fine water spray to cool endangered containers.

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe spray. Do not get in eyes, on skin, or on clothing. Eliminate all ignition sources if safe to do so.

If possible, eliminate leakage. Provide adequate ventilation. Wear appropriate protective equipment. Take off immediately all 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. In case of release, notify competent authorities. 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). Beware of reignition. Thoroughly clean surrounding area.

Never return spills in original containers for re-use.

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.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wear appropriate protective equipment.
Take off immediately all contaminated clothing and wash it before reuse. Work place should be equipped with a shower and an eye rinsing apparatus.

Precautions against fire and explosion:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
Use only explosion-protected equipment/instruments. In partially filled containers explosive mixtures may form.
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 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: Oxidizing agents.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
64-17-5	Ethanol	USA: ACGIH: STEL	1,000 ppm
		USA: IDLH: TWA	3,300 ppm [10% LEL]
		USA: NIOSH: TWA	1,900 mg/m ³ ; 1,000 ppm
		USA: OSHA: TWA	1,900 mg/m ³ ; 1,000 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
75-28-5	Isobutane	USA: ACGIH: TWA	1,000 ppm
		USA: NIOSH: TWA	1,900 mg/m ³ ; 800 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. In case of inadequate ventilation wear respiratory protection. Recommendation: Use combination filter type ABEK-P2 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, self-contained breathing apparatus must be used.
Hand protection:	Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: Butyl caoutchouc (butyl rubber) Layer thickness: ≥ 0.7 mm Breakthrough time: > 240 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:	Do not breathe 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 immediately all contaminated clothing and wash it before reuse. 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:	Form: Aerosol white
Odor:	Characteristic
Odor threshold:	No data available
Melting point/freezing point:	Not applicable, Aerosol
Initial boiling point and boiling range:	Not applicable, Aerosol
Flammability:	Extremely flammable aerosol.
Explosion limits:	LEL (Lower Explosion Limit): 2.50 Vol-% UEL (Upper Explosive Limit): 15.00 Vol-%
Flash point/flash point range:	-127.48 °F
Evaporation rate:	No data available
Auto-ignition temperature:	Not applicable, Aerosol
Decomposition temperature:	No data available
pH:	No data available
Viscosity:	No data available
Water solubility:	Not miscible in every proportion

Partition coefficient: n-octanol/water:	<p>at 68 °F: 2.89 log K(o/w) (Butane) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.</p> <p>at 68 °F: 2.76 log K(o/w) (Isobutane) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.</p> <p>at 68 °F: -0.35 log K(o/w) (Ethanol) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.</p> <p>at 68 °F: 2.36 log K(o/w) (Propane) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.</p>
Vapor pressure:	No data available
Density:	No data available
Vapor density:	No data available
Particle characteristics:	Not applicable

Additional information

Explosive properties:	Potentially explosive mixtures may form if adequate ventilation is not provided.
Oxidizing characteristics:	Not oxidising
Ignition temperature:	548.6 °F

10. Stability and reactivity

Reactivity:	Extremely flammable aerosol.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	<p>Potentially explosive mixtures may form if adequate ventilation is not provided.</p> <p>Pressurised container: May burst if heated.</p>
Conditions to avoid:	<p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.</p> <p>Do not expose to temperatures exceeding 50 °C/122 °F.</p>
Incompatible materials:	Oxidizing agents
Hazardous decomposition products:	No hazardous decomposition products when regulations for storage and handling are observed.

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 (CAS 106-97-8):
LC50 Rat, inhalative (gas) : > 800,000 ppmV/15min

Information about Ethanol (CAS 64-17-5):
LD50 Rat, oral: 10,470 mg/kg (OECD 401)
LD50 Rabbit, dermal: > 15,800 mg/kg
LC50 Rat, inhalative (vapor) : > 50 mg/L/4h (OECD 403)

Carcinogenic effect, Ethanol (CAS 64-17-5):

IARC Rating: Group 1

OSHA Carcinogen: not listed

NTP Rating: not listed

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Harmful to aquatic life.

Information about Butane (CAS 106-97-8):

Fish toxicity:

LC50: 25.4 mg/L/96h

NOEC: 1.81 mg/L/30d

Daphnia toxicity:

LC50: 14.8 mg/L/48h

NOEC Daphnia magna (Big water flea): 1.105 mg/L/30d

Algae toxicity:

EC50: 12.4 mg/L/96h

data obtained by analogy conclusion, e.g. (Q)SAR

Information about Ethanol (CAS 64-17-5):

Fish toxicity:

LC50 Oncorhynchus mykiss: 11,200 mg/L/96h

NOEC Danio rerio (zebrafish): 250 mg/L/5d (OECD 212)

Daphnia toxicity:

EC50 Artemia salina: 857 mg/L/48h

NOEC Daphnia magna (Big water flea): 9.6 mg/L/10d

Algae toxicity:

ErC50 Chlorella vulgaris (unicellular green algae): 275 mg/L/72h (OECD 201)

NOEC Chlorella vulgaris (unicellular green algae): 11.5 mg/L/72h (OECD 201)

Information about Propane (CAS 74-98-6):

Fish toxicity:

LC50: 53.1 mg/L/96h

NOEC: 3.6 mg/L/30d

Daphnia toxicity:

LC50: 1.95 mg/L/48h

NOEC Daphnia magna (Big water flea): 1.105 mg/L/30d

Algae toxicity:

EC50: 20.6 mg/L/96h

data obtained by analogy conclusion, e.g. (Q)SAR

Information about Isobutane (CAS 75-28-5):

Fish toxicity:

LC50: 29.5 mg/L/96h

NOEC: 2.09 mg/L/30d

Daphnia toxicity:

LC50: 17.1 mg/L/48h

NOEC Daphnia magna (Big water flea): 1.25 mg/L/30d

Algae toxicity:

EC50: 13.9 mg/L/96h

data obtained by analogy conclusion, e.g. (Q)SAR

Persistence and degradability

Further details: Biodegradability: Product is readily biodegradable.
Information about Butane (CAS 106-97-8), Propane (CAS 74-98-6), Isobutane (CAS 75-28-5): Easily bio-degradable (data obtained by analogy conclusion, e.g. (Q)SAR)
Information about Ethanol (CAS 64-17-5):
Oxygen consumption: 84%/20d

Bioaccumulative potential

Partition coefficient: n-octanol/water:
at 68 °F: 2.89 log K(o/w) (Butane)
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
at 68 °F: 2.76 log K(o/w) (Isobutane)
Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
at 68 °F: -0.35 log K(o/w) (Ethanol)
Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
at 68 °F: 2.36 log K(o/w) (Propane)
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 enter into ground-water, surface water or drains.

13. Disposal considerations

Waste treatment methods

Product

Recommendation: Do not pierce or burn, even after use. Dispose of waste according to applicable legislation. Do not allow to enter drains.

Package

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

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 2.1, Subrisk -
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 transport as bulk according IBC - Code.

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: 1000 mL
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



SAFETY DATA SHEET

according to HCS 2024 (29 CFR 1910.1200)

635L24 - 3D-Scanning Spray AESUB white

Material number 635L24

Revision date: 4/8/2026
Version: 1.0
Replaces version: 0.0
Language: en-US
Date of print: 5/29/2026

Page: 11 of 12

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

Ethanol: TSCA Inventory: listed
Carcinogen Status: IARC Rating: Group 1
OSHA Carcinogen: not listed
NTP Rating: not listed
NIOSH Recommendations:
Occupational Health Guideline: 0262

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

Isobutane: TSCA Inventory: listed
Clean Air Act:
CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f
NIOSH Recommendations:
Occupational Health Guideline: 0350*

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 10 - 25 % Ethanol, 50 - 75 % Butane, 10 - 25 % Propane, 1 - 5 % Isobutane.
Revision date: 4/8/2026
Date of first version: 4/7/2026

Classification procedure: Physical hazards: on basis of test data
Health hazards, environmental hazards: calculation method

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:

Aerosol: Aerosol
Aquatic toxicity - acute: Hazardous to the aquatic environment - acute
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
EC50: Effective Concentration 50%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
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
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
QSAR: Quantitative Structure-Activity Relationship
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.