

**1. Product and company identification**

**Product identifier**

Trade name: 635L14 - ORTHOCRYL Spray Lacquer, clear

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

General use: Paint for orthopedic procedures. Aerosol.  
Only for industrial users.

**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

Dept. 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: Form: liquid with compressed propellant, Aerosol

Color: colorless, clear

Odor: like ketone

Classification: Aerosol - Category 1; Eye Irritation - Category 2A;  
Specific Target Organ Toxicity (Single Exposure) - Category 3;  
Specific Target Organ Toxicity (Repeated Exposure) - Category 2;

Hazard symbols:



Signal word: **Danger**

Hazard statements: Extremely flammable aerosol.  
 Pressurised container: May burst if heated.  
 Causes serious eye irritation.  
 May cause drowsiness or dizziness.  
 May cause damage to organs through prolonged or repeated exposure.

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.  
 Do not breathe spray.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Call a POISON CENTER if you feel unwell.  
 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) and SIMDUT in Canada.

### Hazards not otherwise classified

Vapors may form explosive mixtures with air.  
 Exposure to temperatures exceeding 122 °F will increase pressure: resulting in danger of bursting or explosion.  
 see section 11: Toxicological information

## 3. Composition / Information on ingredients

Chemical characterization: Preparation of active ingredients with propellant.

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 67-64-1	Acetone	30 - 60 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 123-86-4	n-Butyl acetate	10 - 30 %	Flammable Liquid - Category 3. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 108-65-6	2-Methoxy-1-methylethyl acetate	1 - 5 %	Flammable Liquid - Category 3.
CAS 8052-41-3	Stoddard solvent	0.5 - 1.5 %	Flammable Liquid - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aspiration Toxicity - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 74-98-6	Propane	10 - 30 %	Flammable Gas - Category 1. Compressed Gas.
CAS 106-97-8	n-Butane, <0,1% 1,3-Butadiene	3 - 7 %	Flammable Gas - Category 1. Liquefied Gas.
CAS 75-28-5	Isobutane	1 - 5 %	Flammable Gas - Category 1. Compressed Gas.

## 4. First aid measures

- General information: If victim is at risk of losing consciousness, position and transport on their side.
- In case of inhalation: Move victim to fresh air, put at rest and loosen restrictive clothing.  
If the casualty has difficulty breathing, call a doctor immediately.
- Following skin contact: Immediately remove all contaminated clothing. 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 5 minutes holding eyelids apart.  
Subsequently consult an ophthalmologist.
- After swallowing: Swallowing is not regarded as a possible way of exposition.

### Most important symptoms/effects, acute and delayed

Causes serious eye irritation.  
Repeated exposure may cause skin dryness or cracking.  
In case of inhalation:  
May cause damage to organs through prolonged or repeated exposure.  
Product affects central nervous system.  
Danger of metabolic acidosis.  
Symptoms: Headache, dizziness, fatigue, muscle weakness, numbing effect and, in exceptional cases, unconsciousness.

### Information to physician

Treat symptomatically.

## 5. Fire fighting measures

- Flash point/flash point range:  
    <= -0.4 °F
- Auto-ignition temperature: No data available
- Suitable extinguishing media:  
    Extinguishing powder, alcohol resistant foam, carbon dioxide
- Extinguishing media which must not be used for safety reasons:  
    strong water jet

### Specific hazards arising from the chemical

Extremely flammable aerosol. Vapors may form explosive mixtures with air.  
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: Cool exposed containers with water spray.  
Container under pressure. Heating will lead to pressure increase: Danger of bursting and explosion.

## 6. Accidental release measures

- Personal precautions: Eliminate all ignition sources if safe to do so.  
Wear appropriate protective equipment. Keep unprotected people away.  
Do not breathe vapor or spray. Provide adequate ventilation.  
Avoid contact with skin and eyes.
- Environmental precautions:  
    Do not allow to enter soil, sewage, water bodies, lower level rooms or pits.

Methods for clean-up: Take up with non-flammable, liquid binding material (e.g. sand/earth/diatomaceous earth/vermiculit) and perform disposal according to instructions.

Additional information: Use only explosion-protected equipment/instruments.

## 7. Handling and storage

### Handling

Advices on safe handling: Use only in well-ventilated areas. Do not breathe vapor or spray.

Wear suitable protective clothing. Avoid contact with skin, eyes, and clothing.

Precautions against fire and explosion:

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

Protect from direct exposure to sunlight and temperatures exceeding 122 °F.

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

Do not open or incinerate, even when empty. Do not spray into flames or on incandescent objects.

Use only non-sparking tools.

Container under pressure.

### Storage

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.

Keep container dry. Keep only in the original container.

Consider compliance with applicable regulations for pressurised small gas containers

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Hints on joint storage:

Keep away from combustible materials.

Keep away from strong oxidizing agents.

Keep away from food, drink and animal feedingstuffs.

**8. Exposure controls / personal protection**

**Exposure guidelines**

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
67-64-1	Acetone	USA: ACGIH: STEL	500 ppm
		USA: ACGIH: TWA	250 ppm
		USA: NIOSH: TWA	590 mg/m <sup>3</sup> ; 250 ppm
		USA: OSHA: TWA	2400 mg/m <sup>3</sup> ; 1000 ppm
123-86-4	n-Butyl acetate	USA: NIOSH: STEL	950 mg/m <sup>3</sup> ; 200 ppm
		USA: NIOSH: TWA	710 mg/m <sup>3</sup> ; 150 ppm
		USA: OSHA: TWA	710 mg/m <sup>3</sup> ; 150 ppm
8052-41-3	Stoddard solvent	NIOSH: Ceiling	1800 mg/m <sup>3</sup>
		USA: ACGIH: TWA	525 mg/m <sup>3</sup> ; 100 ppm
		USA: NIOSH: TWA	350 mg/m <sup>3</sup>
		USA: OSHA: TWA	2900 mg/m <sup>3</sup> ; 500 ppm
74-98-6	Propane	USA: NIOSH: TWA	1800 mg/m <sup>3</sup> ; 1000 ppm
		USA: OSHA: TWA	1800 mg/m <sup>3</sup> ; 1000 ppm
106-97-8	n-Butane, <0,1% 1,3-Butadiene	USA: ACGIH: TWA	1000 ppm
		USA: NIOSH: TWA	1900 mg/m <sup>3</sup> ; 800 ppm
75-28-5	Isobutane	USA: ACGIH: TWA	1000 ppm
		USA: NIOSH: TWA	1900 mg/m <sup>3</sup> ; 800 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
67-64-1	Acetone	USA: ACGIH-BEI, urine	25 mg/L	acetone	end of exposure or end of shift

**Engineering controls**

Take precautionary measures against static discharges.  
 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.  
 Glove material: nitrile rubber, neoprene  
 Breakthrough time: > 480 min.  
 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.  
 Use filter against vapors of low boiling organic substances according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.  
 The following applies to propane in general:  
 If the concentration is exceeded, closed-circuit breathing apparatus must be used!

General hygiene considerations:

- Keep away from heat sources, sparks and open flames.
- Do not breathe vapor or spray.
- Avoid contact with skin, eyes, and clothing.
- When using do not eat, drink or smoke.
- Wash hands before breaks and after work.
- Use only non-sparking tools.

**9. Physical and chemical properties**

**Information on basic physical and chemical properties**

Appearance:	Form: liquid with compressed propellant, Aerosol Color: colorless, clear
Odor:	like ketone
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	<= -0.4 °F
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 1.00 Vol-% UEL (Upper Explosive Limit): 15.00 Vol-% (n-Butyl acetate)
Vapor pressure:	2700 - 3500 hPa
Vapor density:	No data available
Density:	0.72 g/mL
Water solubility:	partially soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	Relative vapor density at 68 °F (air=1): >1 Evaporation rate: <1 (ether = 1)

**10. Stability and reactivity**

Reactivity:	Extremely flammable aerosol. Pressurised container: May burst if heated.
Chemical stability:	Product is stable under normal storage conditions.
Possibility of hazardous reactions	Vapors may form explosive mixtures with air.
Conditions to avoid:	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. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Do not force spray can open.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products:

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

Thermal decomposition: No data available

## 11. Toxicological information

### Toxicological tests

Toxicological effects: Acute toxicity (oral): Lack of data.  
Acute toxicity (dermal): Lack of data.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation: Lack of data.  
Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Lack of data.  
Germ cell mutagenicity/Genotoxicity: Lack of data.  
Carcinogenicity: Lack of data.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
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): Specific Target Organ Toxicity (Repeated Exposure) - Category 2 = May cause damage to organs through prolonged or repeated exposure.  
Aspiration hazard: Lack of data.

### Symptoms

In case of prolonged exposure: Systemic damage to kidneys, liver and heart as well as neuropsychiatric disturbances are produced. Other symptoms: lung damages. May produce blood effects.

In case of inhalation: dizziness, headache.

After contact with skin:

Mild irritant. Repeated exposure may cause skin dryness or cracking.

## 12. Ecological information

### Ecotoxicity

Further details: No data available

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

**Additional ecological information**

Volatile organic compounds (VOC):

100 % by weight = 720 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.

**Contaminated packaging**

Recommendation: Dispose of waste according to applicable legislation.

**Additional information**

Do not open with force or incinerate, even when empty.

Do not dispose of with household waste.

Empty carefully and completely, if possible.

**14. Transport information****USA: Department of Transportation (DOT)**

Identification number: UN1950  
Proper shipping name: UN 1950, 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





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**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  
Contaminated packaging - Instructions: P207, LP200  
Contaminated packaging - 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**

Acetone:	TSCA Inventory: listed TSCA HPVC: not listed Clean Air Act: SOCMI Chemical: yes Other Environmental Laws: CERCLA: RQ 5000 lbs. RCRA Hazardous Wastes: Code U002 RCRA Groundwater Monitoring: Methods 8240 / PQL 100 NIOSH Recommendations: Occupational Health Guideline: 0004*
n-Butyl acetate:	TSCA Inventory: listed TSCA HPVC: not listed Clean Water Act: Hazardous Substances: RQ 5000 lbs. Other Environmental Laws: CERCLA: RQ 5000 lbs. NIOSH Recommendations: Occupational Health Guideline: 0072
2-Methoxy-1-methylethyl acetate:	TSCA Inventory: listed; EPA flags P TSCA HPVC: not listed
Stoddard solvent:	TSCA: not listed
Propane:	TSCA Inventory: listed TSCA HPVC: not listed Clean Air Act: Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f NIOSH Recommendations: Occupational Health Guideline: 0524
n-Butane, <0,1% 1,3-Butadiene:	TSCA Inventory: listed TSCA HPVC: not listed Clean Air Act: Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f NIOSH Recommendations: Occupational Health Guideline: 0068*
Isobutane:	TSCA Inventory: listed TSCA HPVC: not listed Clean Air Act: Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f NIOSH Recommendations: Occupational Health Guideline: 0350*

**National regulations - U.S. State Regulations**

Acetone:	California Prop 65 List: None Delaware Air Quality Management List: DRQ: 5000 - RQ State: Federal Regulations Apply Idaho Air Pollutant List: Title 585: AAC: 89 - EL: 119 - OEL: 1780 Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9 Minnesota Haz. Substance: Codes: AON - Ratings: 7.16 - Status: Title III New York List of Hazardous Substances: RQ-Air: 5000 - RQ-Land: 1 - Note: No Note Associated with this chemical. Pennsylvania Haz. Substance code: E Washington Air Contaminant: TWA: 750 ppm - 1800 mg - STEL: 1000 ppm - 2400 mg
n-Butyl acetate:	CAS# 123-86-4 can be found on the following state right to know lists: - California, Massachusetts, Minnesota, New Jersey, Pennsylvania.
2-Methoxy-1-methylethyl acetate:	Idaho Air Pollutant List: Title 585: AAC: 3.6 - EL: 24 - OEL: - - Title 586: -
Propane:	California Proposition 65 code: - Delaware Air Quality Management List: DRQ: F 1000** - RQ State: State requirements differs from Federal Massachusetts Haz. Substance codes: 2,4,5,6 Minnesota Haz. Substance: Codes: AP - Ratings: - - Status: Title III New Jersey RTK Hazardous Substance: DOT: 1978 - Sub No.: 1594 - TPQ: - Pennsylvania Haz. Substance code: - Washington Air Contaminant: TWA: 1000 ppm - 1800 mg
n-Butane, <0,1% 1,3-Butadiene:	Delaware Air Quality Management List: DRQ: F 1000** - RQ State: State requirements differs from Federal Massachusetts Haz. Substance codes: 4,5,6 Minnesota Haz. Substance: Codes: A - Ratings: - - Status: Title III New Jersey RTK Hazardous Substance: DOT: 1011 - Sub No.: 0273 - TPQ: - Pennsylvania Haz. Substance code: - Washington Air Contaminant: TWA: 800 ppm - 1900 mg
Isobutane:	California Proposition 65 code: - Delaware Air Quality Management List: DRQ: F 1000** - RQ State: State requirements differs from Federal Massachusetts Haz. Substance codes: 6 New Jersey RTK Hazardous Substance: DOT: 1969 - Sub No.: 1040 - TPQ: - Pennsylvania Haz. Substance code: -

**National regulations - Great Britain**

Hazchem-Code: -

**16. Other information**

Text for labeling: Contains 30 - 60 % Acetone, 10 - 30 % n-Butyl acetate, 1 - 5 % 2-Methoxy-1-methylethyl acetate, 0.5 - 1.5 % Stoddard solvent, 10 - 30 % Propane, 3 - 7 % n-Butane, <0,1% 1,3-Butadiene, 1 - 5 % Isobutane. Safety data sheet available on request.

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

Reason of change: Changes in section 1.3: Corporate headquarters  
 Date of first version: 10/21/1994

**Department issuing data sheet**

Contact person: see section 1: Dept. 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.