

## 1 Identification

### Product identifier

Trade name: 83A2 - Silvent "H"

### Recommended use and restrictions on use

General use: Solvent, for orthopedic procedures.  
For commercial user only.

### 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

Skin Irritation 2

Specific Target Organ Toxicity (Single Exposure) 3

Aspiration Toxicity 1

Aquatic toxicity - acute 1

Aquatic toxicity - chronic 1

Highly flammable liquid and vapour.

Causes skin irritation.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

### Information elements

Symbols:



Signal word:

**Danger**

**Hazard statements:**

- Highly flammable liquid and vapour.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- May cause drowsiness or dizziness.
- 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.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Call a POISON CENTER/doctor if you feel unwell.
- Do NOT induce vomiting.

### Other hazards known to the supplier with respect to the product

## 3 Composition/Information on ingredients

### Material/substance

Chemical name:  $\text{CH}_3-(\text{CH}_2)_5-\text{CH}_3 = \text{C}_7 \text{H}_{16}$ , n-Heptane

CAS-Number: 142-82-5

## 4 First-aid measures

### Description of necessary first-aid measures

**General information:** If victim is at risk of losing consciousness, position and transport on their side. Do not allow victim to become chilled. Keep victim warm. Take off immediately all contaminated clothing.

**In case of inhalation:** Move victim to fresh air, put at rest and loosen restrictive clothing. In case of respiratory difficulties seek medical attention.

**In case of swallowing:** Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Danger of aspiration! Keep airway open. Immediately get medical attention.

**In case of skin contact:** After contact with skin, wash immediately with soap and plenty of 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. Subsequently consult an ophthalmologist.

### Most important symptoms and effects, whether acute or delayed

Irritation.  
After resorption: Headache, dizziness, inebriation, agitation, unconsciousness, apnea.

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

Following exposure through the pores use activated carbon and a saline laxative.  
In case of inhalation In case of breathing difficulties administer oxygen.  
Subsequent observance for pneumonia and lung oedema.

## 5 Fire-fighting measures

### Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Extinguishing powder, alcohol resistant foam, water spray jet, carbon dioxide.

Unsuitable extinguishing media:

Strong water jet

### Specific hazards arising from the product

Highly flammable liquid and vapour. Liquid evaporates quickly.

Explosive mixtures with air may even form at room temperature.

vapours are heavier than air and will travel at floor level. Beware of reignition.

In case of fire may be liberated: 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:

Cool endangered containers with water spray and, if possible, remove from danger zone. Do not allow fire water to penetrate into surface or ground water.

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.

Plug leak if safely possible.

Avoid contact with skin and eyes. Wear protective equipment.

Do not breathe vapours. Provide adequate ventilation.

Environmental precautions:

Do not allow to enter drains, surface waters, basements or pits.

Risk of explosion if the liquid enters the sewage system.

When released into the environment, alert police and fire brigade.

### Methods and material for containment and cleaning up

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

In case of spills of large quantities: Dam spills and pump to remove. Contact expert.

Additional information:

Use only spark proof tools. Beware of reignition.

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 inhale substance.

Execute works under fume hood. Provide room air exhaust at ground level.

Avoid the formation of aerosol/vapours. Avoid contact with skin and eyes.

### Precautions against fire and explosion:

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.  
vapours may form explosive mixtures with air.  
Beware of reignition. Do not weld. Use only spark proof tools.  
Use only explosion-proof equipment. Use grounding equipment.

### Conditions for safe storage, including any incompatibilities

#### Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 15 °C and 25 °C.  
Provide adequate ventilation. Keep away from sources of ignition and heat.  
Qualified materials: steel, stainless steel, iron.

#### Hints on joint storage:

Do not store together with combustible or self-igniting materials or any highly flammable solids.

#### Further details:

Store locked up.

## 8 Exposure controls/Personal protection

### Control parameters

#### Occupational exposure limit values:

| Type                        | Limit value                       |
|-----------------------------|-----------------------------------|
| Canada: Alberta, OEL 15 min | 2,050 mg/m <sup>3</sup> ; 500 ppm |
| Canada: Alberta, OEL 8 hour | 1,640 mg/m <sup>3</sup> ; 400 ppm |

### Appropriate engineering controls

Execute works under fume hood. Do not inhale substance.  
The substance should only be handled in closed apparatus or systems.

### Individual protection measures, such as personal protective equipment

#### Respiratory protection:

Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.  
Use filter type A (= against vapours of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.  
In case of prolonged or repeated exposures: use self-contained breathing apparatus.

#### Hand protection:

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.  
Glove material: Nitrile rubber-Layer thickness > 0,4 mm.  
Breakthrough time: > 480 min.  
Possible alternatives: Fluororubber (Viton) (0,4 mm).  
Unsuitable materials: natural rubber, butyl caoutchouc (butyl rubber), PVC.  
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:

Wear suitable protective clothing.  
In case of handling larger quantities: flame-retardant protective clothing, antistatic.

#### General hygiene considerations:

Take off immediately all contaminated clothing.  
Avoid contact with skin and eyes.  
Do not breathe vapours. Wash hands before breaks and after work.  
Have eye wash bottle or eye rinse ready at work place.

### 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                                  | Form: liquid   |
| Colour:  | colourless   |
| Odour:   | weak like petroleum  |
| Odour threshold:   | No data available  |
| Melting point and freezing point:                                      | -90.5 °C   |
| Boiling point or initial boiling point and boiling range:              | 98.34 °C (1013 hPa)  |
| Flammability:  | No data available  |
| Lower and upper explosion limit or lower and upper flammability limit: | LEL (Lower Explosion Limit): 1.10 Vol-%<br>UEL (Upper Explosive Limit): 6.70 Vol-%                           |
| Flash point/flash point range:   | -4 °C  |
| Evaporation rate:  | No data available  |
| Auto-ignition temperature:   | No data available  |
| Decomposition temperature:   | No data available  |
| pH:  | No data available  |
| Dynamic viscosity:   | at 20 °C: 0.42 mPa*s   |
| Solubility:  | soluble in ethanol and acetone   |
| Water solubility:  | at 20 °C: 0.05 g/L   |
| Partition coefficient — n-octanol/water:                               | 4.66 log P(o/w)<br>Based on the n-octanol/water partition coefficient accumulation in organisms is possible. |
| Vapour pressure:   | at 20 °C: 48 hPa<br>at 50 °C: 190 hPa  |
| Density and/or relative density  | at 20 °C: 0.684 g/mL   |
| Vapour density:  | No data available  |
| Particle characteristics:  | Not applicable   |

### Additional information

|                         |  |
|-------------------------|--|
| Explosive properties:   | Explosive mixtures with air may even form at room temperature.   |
| Ignition temperature:   | 215 °C   |
| Additional information: | Molar mass: 100,21 g/mol<br>Odour threshold: 50 ppm<br>Relative vapour density at 20 °C (air=1): 3,45<br>Saturation concentration at 20 °C: 197000 mg/m <sup>3</sup> |

## 10 Stability and reactivity

|             |                                     |
|-------------|-------------------------------------|
| Reactivity: | Highly flammable liquid and vapour. |
|-------------|-------------------------------------|

**Chemical stability:** Stable under recommended storage conditions.  
Liquid evaporates quickly. At normal air pressure, the product may be distilled without decomposition.

**Unsuitable materials:**  
Rubber. Various plastics are incompatible work materials.

**Possibility of hazardous reactions:**  
Explosive mixtures with air may even form at room temperature.  
vapours form potentially explosive mixtures with air, which are heavier than air. Air-vapour mixture may travel great distances at floor level and lead to backflash when exposed to an ignition source. Ignition by hot surfaces, sparks and open flames.

**Conditions to avoid:** Keep away from heat sources, sparks and open flames.

**Incompatible materials:** Strong oxidizing agents (Risk of fire/Danger of explosion)

**Hazardous decomposition products:**  
In case of fire may be liberated: Carbon monoxide and carbon dioxide.

## 11 Toxicological information

### Information on the likely routes of exposure

No data available

### Health hazard information

Acute toxicity (oral): Lack of data.  
Acute toxicity (dermal): Lack of data.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation: Skin Irritation 2 = Causes skin irritation.  
Serious eye damage/irritation: Lack of data.  
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) 3 = May cause drowsiness or dizziness.  
Specific target organ toxicity (repeated exposure): Lack of data.  
Aspiration hazard: Aspiration Toxicity 1 = May be fatal if swallowed and enters airways.

**Acute toxicity:**  
LD50 Rat, oral: > 15,000 mg/kg  
LC50 Rat, inhalative: 103 g/m<sup>3</sup>/4h  
LD50 Rabbit, dermal: > 3,160 mg/kg

**Other information:** Sensitization: Not known to cause sensitization.  
Physiologically benign according to current data (not a mutagen, carcinogen or teratogen).

### Symptoms

In case of inhalation: vapours irritate mucous membranes and respiratory system.

If higher concentrations occur: Headache, dizziness, inebriation, agitation, unconsciousness, apnea.

In case of ingestion:

Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation.

Other symptoms: Dizziness, unconsciousness, breathing paralysis. Pulmonary edema is possible.

After contact with skin:

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

After eye contact: May cause irritations.

## 12 Ecological information

### Ecotoxicity

Aquatic toxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Substance floats on the water surface.

Algae toxicity: EC50 algae: 1,5 mg/L/8 h.

Daphnia toxicity: EC50 Daphnia magna: 1,5 mg/L/48 h.

Fish toxicity: LC50 Carassius auratus: 4 mg/L/24 h.

Further details: Henry constant: 278730 Pa\*m<sup>3</sup>/mol (volatile).

### Persistence and degradability

Further details: Product is biodegradable.

Bioconcentration factor (BCF): 340 - 2000 (calculated)

### Bioaccumulative potential

Partition coefficient — n-octanol/water:

4.66 log P(o/w)

Based on the n-octanol/water partition coefficient accumulation in organisms is possible.

### Mobility in soil

No data available

### Other adverse effects

Oxygen demand: BOD: 1,92 mgO<sub>2</sub>/l/5d

ThOD: 3,5 g/g

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

In case of spills of large quantities: Danger to drinking water.

## 13 Disposal considerations

### Waste treatment methods

#### Product

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations.  
Do not dispose of with household waste.  
Do not empty into drains.

#### Package

Recommendation: Dispose of waste according to applicable legislation.  
Non-contaminated packages may be recycled.

## 14 Transport information

### UN number

TDG: UN1206  
IMDG, IATA-DGR: UN 1206

### UN proper shipping name

TDG, IATA-DGR: UN 1206, HEPTANES  
IMDG: UN 1206, HEPTANES (n-Heptane), MARINE POLLUTANT

### Transport hazard class

TDG: 3  
IMDG: Class 3, Subrisk P  
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)

Explosive limit and limited quantity index: 1L  
Passenger carrying road or rail index: 5L  
Marine pollutant: P



### 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: | TP2   |
| Stowage and handling:           | Category B.   |
| Properties and observations:    | Colourless volatile liquids. Explosive limits: 1.1%-6,7%. n-HEPTANE: flashpoint -4°C c.c. Immiscible with water. Irritating to skin, eyes and mucous membranes. |
| Marine pollutant:               | yes   |
| Segregation group:              | none  |

### Air transport (IATA)

|   |  |
|---|--|
| Proper shipping name:                   | UN 1206, HEPTANES                        |
| 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 - Canada

DSL: listed

### Further regulations, limitations and legal requirements

No data available

## 16 Other information

|                        |  |
|------------------------|--|
| Text for labelling:    | Contains n-Heptane.  |
| Revision date:         | 17/12/2025   |
| Date of first version: | 13/1/1998  |
| Reason of change:      | General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022<br>General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200) |

### 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  
 Aspiration Toxicity: Aspiration toxicity  
 BCF: Bioconcentration Factor  
 BOD: Biochemical oxygen demand  
 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  
 OEL: Occupational Exposure Limit Value  
 OSHA: Occupational Safety and Health Administration  
 PBT: Persistent, bioaccumulative and toxic  
 PNEC: Predicted no-effect concentration  
 PVC: Polyvinyl chloride  
 Skin Irritation: Skin irritation  
 STOT SE: Specific target organ toxicity - single exposure  
 TDG: Transportation of Dangerous Goods Regulation in Canada  
 ThOD: Theoretical Oxygen Demand  
 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.