

1 Identification

Product identifier

Trade name: 625/757 - lithium-ion battery

Other means of identification

This safety data sheet pertains to the following products:

625B5-1 - Lithium-Ion accumulator 2500mAh

625B2-4 - Lithium-Ion accumulator 2500mAh

757B20 - OTTO BOCK EnergyPack

757B20-1 - OTTO BOCK EnergyPack

757B20-2 - OTTO BOCK EnergyPack

757B20-3 - OTTO BOCK EnergyPack

757B21 - OTTO BOCK EnergyPack

757B21-1 - OTTO BOCK EnergyPack

757B21-2 - OTTO BOCK EnergyPack

757B21-3 - OTTO BOCK EnergyPack

757B500 - Li-Ion Zelle UR-18500 konfektioniert kl./gr. (varying colours)

757B501 - Lithium-Ion Battery

Recommended use and restrictions on use

General use: Lithium-ion battery 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

Article not subject to hazard labelling or classification.

Information elements

not applicable

Other hazards known to the supplier with respect to the product

The battery is hermetically sealed.

danger of releasing ingredients, mentioned in section 3, by damaging the battery

- with strong mechanical action,
- in case of heating and/or Fire,
- with influence of water,
- short circuit.

Hazard statements:

Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.

Information about electrolyte, organic, CAS No. - :

Flammable liquid and vapour. After contact with water: Formation of Hydrogen fluoride. vapours irritate eyes, mucous membranes and respiratory system. vapours may cause drowsiness and dizziness.

3 Composition/Information on ingredients

Mixture

Chemical name:

Lithium-ion battery - Article.

The chemical materials are stored in a hermetically sealed metal case.

Contains Iron (15-25%), Graphite and Carbon (10-20%), Copper (5-15%), Aluminium (2-6%).

Possibly contains Polyvinylidene fluoride.

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 12190-79-3	Cobalt lithium dioxide	20 - 40 %	Respiratory Sensitizer 1. Sensitization - skin 1. Carcinogenicity 2.
CAS -	Electrolyte, organic	10 - 20 %	Flammable Liquid 3.
CAS 7440-44-0	Carbon	10 - 20 %	not classified

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

4 First-aid measures

Description of necessary first-aid measures

General information:

In case of damaged battery cases: Release of dangerous ingredients possible. In case of heating: development of gas/vapour possible.

In case of inhalation:

In case of damaged battery cases:

Provide fresh air. Keep victim at rest in half upright position. Seek medical attention.

In case of swallowing:	In case of damaged battery cases / In case of exposure to hazardous ingredients: Drink large quantities of water. Do not induce vomiting. Risk of perforation in case of vomiting! Immediately get medical attention. Do not try to neutralize.
In case of skin contact:	In case of damaged battery cases / In case of exposure to hazardous ingredients: Immediately clean with water and soap and, if available, apply a generous amount of polyethylene glycol 400 or protective skin cream. Take off immediately all contaminated clothing.
In case of eye contact:	In case of damaged battery cases / In case of exposure to hazardous ingredients: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Afterwards, consult an ophthalmologist immediately.

Most important symptoms and effects, whether acute or delayed

No hazardous reaction when handled and stored according to provisions.
In case of damaged battery cases / In case of exposure to hazardous ingredients:
May cause an allergic skin reaction. vapours may cause drowsiness and dizziness. Other symptoms: respiratory complaints, irritation.

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

Treat symptomatically.

5 Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Extinguishing powder, Extinguishing agent on the basis of sodium chloride, sodium hydrogen carbonate, limestone, or with metal extinguishing powder.
Only in case of small fires: fire extinguisher class D, metal fire extinguisher.

Unsuitable extinguishing media:

Water, foam.

Specific hazards arising from the product

> 100 °C: Generation of heat. Ignition.
In case of fire may be liberated: Toxic metal oxide smoke, toxic gases/vapours, hydrogen fluoride, carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

In case of damaged battery cases:
Eliminate all ignition sources if safe to do so.
Provide fresh air. Avoid exposure.
Wear appropriate protective equipment.
In case of development of vapours or dust:
Do not inhale vapours or dust particles.

Environmental precautions:

Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary.

Methods and material for containment and cleaning up

Take up mechanically. Dispose of waste according to applicable legislation.
Avoid generation of dust.

Information about electrolyte, organic, CAS No. - :

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal. Final cleaning.

7 Handling and storage

Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.

Avoid damage to the battery casing.

In case of damaged battery cases: Avoid exposure.

Precautions against fire and explosion:

Avoid short circuit. Avoid damage to the battery casing.

In case of damaged battery cases: Eliminate all ignition sources if safe to do so.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Provide adequate ventilation. Store in a dry place.

Protect from: humidity, heat, UV-radiation/sunlight

Storage temperature: -20 °C up to 35 °C.

Air humidity: 45% up to 80%.

Hints on joint storage:

Do not store together with strong acids, strong oxidizing agents.

8 Exposure controls/Personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
7782-42-5	Graphite	Canada: Alberta, OEL 8 hour	2 mg/m ³ (respirable fraction)
		Canada: BC, OEL TWA	2 mg/m ³ (respirable fraction)
		Canada: Québec, VEMP	2 mg/m ³ (respirable fraction)
7440-44-0	Carbon	Canada: Alberta, OEL 8 hour	10 mg/m ³
			(Dust limit value, inhalable fraction)
		Canada: Alberta, OEL 8 hour	3 mg/m ³
			(Dust limit value, respirable fraction)
		Canada: BC, OEL TWA	10 mg/m ³
			(Dust limit value, inhalable fraction)
		Canada: BC, OEL TWA	3 mg/m ³
7440-50-8	Copper		(Dust limit value, respirable fraction)
		Canada: Québec, VEMP	10 mg/m ³ (total dust)
		Canada: Québec, VEMP	3 mg/m ³ (total dust, respirable fraction)
		Canada: Alberta, OEL 8 hour	0.2 mg/m ³ (Smoke)
		Canada: Alberta, OEL 8 hour	1 mg/m ³ (Dusts and mist)
		Canada: BC, OEL TWA	0.2 mg/m ³ (Smoke)
		Canada: BC, OEL TWA	1 mg/m ³ (Dusts and mist)
7429-90-5	Aluminium	Canada: Québec, VEMP	0.2 mg/m ³ (Smoke, calculated as Cu)
		Canada: Québec, VEMP	1 mg/m ³
			(Dusts and mist calculated as Cu)
		Canada: Alberta, OEL 8 hour	10 mg/m ³ (metal, dust)
		Canada: Alberta, OEL 8 hour	5 mg/m ³
			(Aluminium powder, pyrotechnic)
		Canada: BC, OEL TWA	1 mg/m ³ (Pyrotechnical powders)

Additional information: The chemical materials are stored in a sealed battery case.

Appropriate engineering controls

In case of damaged battery cases: Provide adequate ventilation.

In case of development of vapours or dust:

The use of local exhaust ventilation is recommended.

Individual protection measures, such as personal protective equipment

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/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used!

Hand protection: In case of damaged battery cases:
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: rubber - breakthrough time >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: In case of damaged battery cases:
Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

General hygiene considerations:

In case of damaged battery cases:
Do not inhale vapours or dust particles.
Avoid exposure.
Keep away from sources of ignition - No smoking.
Wash hands before breaks and after work.

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: solid
Colour:	No data available
Odour:	odourless
Odour threshold:	No data available
Melting point and freezing point:	No data available
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower and upper explosion limit or lower and upper flammability limit:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Solubility:	No data available
Partition coefficient — n-octanol/water:	No data available
Vapour pressure:	No data available
Density and/or relative density	No data available
Vapour density:	No data available
Particle characteristics:	Not applicable

Additional information

Additional information:	No data available
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10 Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Fire hazard in case of technical defects. In case of damaged battery cases: Flammable liquid and vapour. (Electrolyte) After contact with water: formation of Hydrogen fluoride.

Conditions to avoid: > 100 °C: Generation of heat. Ignition.
Protect from: humidity, heat, UV-radiation/sunlight
Avoid short circuit. Avoid damage to the battery casing.
In case of damaged battery cases:
Keep away from sources of ignition - No smoking.

Incompatible materials: Keep away from strong acids and strong oxidizing agents.
In case of damaged battery cases: Keep away from water.

Hazardous decomposition products:
In case of fire may be liberated: Toxic metal oxide smoke, hydrogen fluoride, 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: Lack of data.
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): Lack of data.
Specific target organ toxicity (repeated exposure): Lack of data.
Aspiration hazard: Lack of data.

Other information: In case of damaged battery cases:
Cobalt lithium dioxide: Limited evidence of a carcinogenic effect. May cause sensitization by skin contact.
Information about electrolyte, organic, CAS No. - :
vapours irritate eyes, mucous membranes and respiratory system.
vapours may cause drowsiness and dizziness.

12 Ecological information

Ecotoxicity

Further details: No data available

Persistence and degradability

Further details: Product is not biodegradable.

Bioaccumulative potential

Partition coefficient — n-octanol/water:

No data available

Mobility in soil

No data available

Other adverse effects

General information: Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary.

13 Disposal considerations

Waste treatment methods

Product

Recommendation: Product contains Metallic oxides containing heavy metals.
Recycling or special waste incineration.

Package

Recommendation: Dispose of waste according to applicable legislation.
Packing can be recycled or disposed of.

14 Transport information

UN number

TDG: UN3090

IMDG, IATA-DGR: UN 3480

UN proper shipping name

TDG: UN 3090, Lithium metal batteries

IMDG, IATA-DGR: UN 3480, LITHIUM ION BATTERIES

Transport hazard class

TDG: 9

IMDG: Class 9, Subrisk -

IATA-DGR: Class 9

Packing group

TDG, IATA-DGR: not applicable

IMDG: -

Environmental hazards

Marine pollutant: no



Special precautions in connection with transport or conveyance either within or outside the premises

Canada: Transportation of Dangerous Goods (TDG)

Special Provisions: 34, 123, 137, 138, 1
Explosive limit and limited quantity index: 0
Passenger carrying road or rail index: 5 kg

Sea transport (IMDG)

EmS: F-A, S-I
Special Provisions: 188 230 310 348 376 377 384 387
Limited quantities: 0
Excepted quantities: E0
Package - Instructions: P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
Package - Provisions: -
IBC - Instructions: -
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: -
Tank instructions - Provisions: -
Stowage and handling: Category A. SW19
Properties and observations: Electrical batteries containing lithium ion may react (e.g., flame, heat, emission of toxic, corrosive or flammable gases or vapours) or disassemble due to damage, defects or short circuit.
Marine pollutant: no
Segregation group: none

Air transport (IATA)

Proper shipping name: UN 3480, LITHIUM ION BATTERIES
Hazard label: Lithium batt or Sodium-ion batt
Excepted Quantity Code: E0
Passenger and Cargo Aircraft: Ltd.Qty.: Forbidden
Passenger and Cargo Aircraft: Forbidden
Cargo Aircraft only: Pack.Instr. See 965 - Max. Net Qty/Pkg. See 965
Special Provisions: A88 A99 A154 A183 A201 A213 A331 A334 A802
Emergency Response Guide-Code (ERG): 12FZ

15 Regulatory information

National regulations - Canada

Cobalt lithium dioxide: DSL: listed
Graphite: DSL: listed
Carbon: DSL: listed
Copper: DSL: listed

Further regulations, limitations and legal requirements

No data available

16 Other information

Revision date: 1/1/2026
Date of first version: 8/10/2010
Reason of change: Changes in section 14: IATA-DGR 2026

Abbreviations and acronyms:

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
DSL: Domestic Substances List
EC: European Community
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
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
Respiratory Sensitizer: Sensitisation to the respiratory tract
Sensitization - skin: Skin sensitisation
TDG: Transportation of Dangerous Goods Regulation in Canada
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
TSCA: Toxic Substance Control Act
UN: United Nations
UV: Ultraviolet
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.