

## 1. Product and company identification

### Product identifier

Trade name: 9004=03 - MyGait Heel Switch

### Recommended use and restrictions on use

General use: Lithium batteries 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](http://www.ottobock.ca)

E-mail: [info.canada@ottobock.com](mailto: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 phone number

**COLLECT, Telephone: (613) 996-6666**

**Transport:**

**CONSULTANK Lutz Harder GmbH (Contract QUALI003)**

**Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)**

## 2. Hazards identification

### Emergency overview

Appearance: Form: solid

Odor: odorless

Classification: Article not subject to hazard labeling or classification.

### Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS in Canada.

## Hazards not otherwise classified

In case of ingestion: risk of suffocation!

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:

Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage.

see section 11: Toxicological information

## 3. Composition / Information on ingredients

Chemical characterisation: Lithium batteries - Article, Cell.

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

Contains Electrolyte, organic.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 1313-13-9	Manganese dioxide	< 50 %	Acute Toxicity 4 (oral). Acute Toxicity 4 (inhalative).
CAS -	Electrolyte, organic	< 12 %	not classified
CAS 7439-93-2	Lithium	< 10 %	Water-reactive 1. Skin Corrosion 1B.
CAS 110-71-4	1,2-Dimethoxyethane	< 4 %	Flammable Liquid 2. Acute Toxicity 4 (inhalative). Reproductive toxicity 1B.
CAS 7791-03-9	Lithium perchlorate	< 1 %	Acute Toxicity 4 (oral). Skin Irritation 2. Eye Irritation 2A. Specific Target Organ Toxicity (Single Exposure) 3.

## 4. First aid measures

General information: in case of damaged battery cases: Release of dangerous ingredients possible.

Generates dangerous gases or fumes in contact with.

In case of inhalation: in case of damaged battery cases:

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

Following skin contact: in case of damaged battery cases / In case of exposure to hazardous ingredients:

Clean with plenty of water. If possible, also wash with polyethylene glycol 400.

Take off immediately all contaminated clothing.

After 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.

After 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.

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

No hazardous reaction when handled and stored according to provisions.

In case of ingestion: Risk of suffocation (Cell)!

in case of damaged battery cases: health hazards. Causes severe skin burns and eye damage.

### Information to physician

Treat symptomatically.

## 5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature:

No data available

Suitable extinguishing media:

Extinguishing powder, Extinguishing agent on the basis of sodium chloride, sodium hydrogen carbonate, limestone, or with metal extinguishing powder.

Extinguishing media which must not be used for safety reasons:

Water, carbon dioxide, foam

### Specific hazards arising from the chemical

> 100 °C: Cell may explode.

In case of fire may be liberated: hydrogen fluoride, Chlorine compounds, 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:

in case of damaged battery cases:

Remove all sources of ignition.

Provide fresh air. Avoid contact with skin and eyes.

Wear suitable gloves.

In case of development of vapors or dust:

Do not inhale vapors or dust particles.

Environmental precautions:

Discharge into the environment must be avoided.

Methods for clean-up:

Take up mechanically. Dispose of waste according to applicable legislation.

Avoid generation of dust.

Electrolyte, organic: 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

### 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.  
Provide fire extinguishing equipment.

## Storage

Requirements for storerooms and containers:

Provide adequate ventilation. Store in a dry place.  
Protect from: humidity, heat, UV-radiation/sunlight  
Storage temperature: < 35 °C

Hints on joint storage:

Avoid contact with water, acids, alcohols, halogenic hydrocarbons and halogens.

## 8. Exposure controls / personal protection

### Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
1313-13-9	Manganese dioxide	Canada: VEMP	0.05 mg/m <sup>3</sup> (Aerosol, respirable fraction)
		Canada: VEMP	0.2 mg/m <sup>3</sup> (Aerosol, inhalable fraction)
		USA: IDLH: TWA	500 Mn/m <sup>3</sup>
110-71-4	1,2-Dimethoxyethane	Canada: OEL TWA	18 mg/m <sup>3</sup> ; 5 ppm (may be absorbed through the skin)
		USA: ACGIH: TWA	0.5 ppm (may be absorbed through the skin)

Additional information:

The chemical materials are stored in a sealed battery case.

### Engineering controls

In case of damaged battery cases: Provide adequate ventilation.  
In case of development of vapors or dust:  
The use of local exhaust ventilation is recommended.  
See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection:

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

Skin 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.

Respiratory protection:

In case of damaged battery cases:  
If necessary: When vapors form combination filter Use filter type A, B, K according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

### General hygiene considerations:

Avoid damage to the battery casing.  
In case of damaged battery cases:  
Do not inhale vapors or dust particles.  
Avoid contact with skin and eyes.

### Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Appearance:	Form: solid
Odor:	odorless
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	No data available
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	No data available

## 10. Stability and reactivity

Reactivity:	> 100 °C: Cell may explode.
Chemical stability:	Stable under recommended storage conditions. Not readily combustible.
Possibility of hazardous reactions:	Fire hazard in case of technical defects. In case of damaged battery cases: Lithium: Reacts violently with water liberating hydrogen. Without inert protective gas risk of spontaneous ignition. Lithium perchlorate: Contact with combustible material may cause fire.
Conditions to avoid:	Protect from: humidity, heat, UV-radiation/sunlight Avoid short circuit. Avoid damage to the battery casing.

Incompatible materials: in case of damaged battery cases:  
Avoid contact with water, acids, alcohols, halogenic hydrocarbons, nitrogen, carbon dioxide, oxygen and halogens.  
Lithium perchlorate: Contact with combustible material may cause fire.

Hazardous decomposition products:  
In case of fire may be liberated: hydrogen fluoride, Chlorine compounds, 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: 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: Cell: risk of suffocation!  
In case of damaged battery cases:  
Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage.  
Vapors irritate eyes, mucous membranes and respiratory system.

## 12. Ecological information

### Ecotoxicity

Further details: No data available

### Mobility in soil

No data available

### Persistence and degradability

Further details: Product is not biodegradable.

### Additional ecological information

General information: Discharge into the environment must be avoided.

## 13. Disposal considerations

### Product

Recommendation: Dispose of waste according to applicable legislation.

### Package

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

## 14. Transport information

### UN number

ADR/RID, IMDG, IATA-DGR:

UN 3091

### UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

### Transport hazard class(es)

ADR/RID: Class 9, Code: M4

IMDG: Class 9, Subrisk -

IATA-DGR: Class 9



### Packing group

ADR/RID, IATA-DGR: not applicable

IMDG: -

### 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: UN3091

Proper shipping name: UN 3091,  
LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

Hazard class or Division: 9

Labels: 9

Special Provisions: 181, 360, 388, 422, A54, A101

Packaging – Exceptions: 185

Packaging – Non-bulk: 185

Packaging – Bulk: 185

Quantity limitations – Passenger aircraft / rail:

5 kg

Quantity limitations – Cargo only: 35 kg

Vessel stowage – Location: A

Vessel stowage – Other: 156

Remarks: In compliance with Special provision 188



### Canada: Transportation of Dangerous Goods (TDG)

UN Number: UN3091  
 Shipping name: UN 3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT  
 TDG class: 9  
 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)

UN number: UN 3091  
 Proper shipping name: UN 3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT  
 Class or division, Subsidiary risk: Class 9, Subrisk -  
 Packing Group: -  
 EmS: F-A, S-I  
 Special Provisions: 188 230 310 360 376 377 384 387 390  
 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 metal 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  
 Remarks: In compliance with Special provision 188

### Air transport (IATA)

UN/ID number: UN 3091  
 Proper shipping name: UN 3091, LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT  
 Class or division, Subsidiary risk: Class 9  
 Hazard label: Lithium batt or Sodium-ion batt  
 Excepted Quantity Code: E0  
 Passenger and Cargo Aircraft: Ltd.Qty.: Forbidden  
 Passenger and Cargo Aircraft: Pack.Instr. 970 - Max. Net Qty/Pkg. 5 kg  
 Cargo Aircraft only: Pack.Instr. 970 - Max. Net Qty/Pkg. 35 kg  
 Special Provisions: A48 A88 A99 A154 A181 A185 A213 A220  
 Emergency Response Guide-Code (ERG): 12FZ  
 Remarks: In compliance with Special provision



## 15. Regulatory information

### National regulations - Canada

Manganese dioxide: DSL: listed

Lithium: DSL: listed

1,2-Dimethoxyethane: DSL: listed

Lithium perchlorate: DSL: listed

### National regulations - U.S. Federal Regulations

This product is an article as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements.

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

No data available

## 16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 0 (Minimal)

Fire: 1 (Slight)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 0 (Minimal)

Flammability: 1 (Slight)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

### Abbreviations and acronyms:

Acute Toxicity: Acute toxicity  
 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  
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships  
 OSHA: Occupational Safety and Health Administration  
 PBT: Persistent, bioaccumulative and toxic  
 PNEC: Predicted no-effect concentration  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals  
 Reproductive toxicity: Reproductive toxicity  
 RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail  
 Skin Corrosion: Skin corrosion  
 Skin Irritation: Skin irritation  
 STOT SE: Specific target organ toxicity - single exposure  
 SVHC: Substance of very high concern  
 TRGS: Technical Rules for Hazardous Substances  
 TSCA: Toxic Substance Control Act  
 UN: United Nations  
 UV: Ultraviolet  
 vPvB: Very persistent and very bioaccumulative  
 Water-reactive: Water-reactive  
 WHMIS: Workplace Hazardous Materials Information System

Reason of change: Changes in section 14: IMDG 2025

Date of first version: 17/2/2016

### 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.