

1. Identification

Product identifier

Trade name: 757B15 - X-ChangePack

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

General use: Electrical batteries and accumulators

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

Article not subject to hazard labelling or classification.

Label elements

not applicable

Other hazards

The battery is hermetically sealed. Avoid short circuit. Avoid damage to the battery casing.

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.

May be corrosive to metals.

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Mixtures

Chemical characterization: Article: Batteries, nickel-metal hydride.

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

Contains metals: Nickel, Iron, Lanthanum, Cerium, Neodymium, Praseodymium, Cobalt, Manganese, Zinc, Aluminium

Contains plastics: Polyamide, Polypropylene, Polyvinyl chloride, Polyethylene, Rubber

Electrolyte: Potassium hydroxide, Sodium hydroxide, Lithium hydroxide, Water

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 7440-02-0	Nickel	30 - 50 %	Sensitization - skin - Category 1. Carcinogenicity - Category 2. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aquatic toxicity - chronic - Category 3.
CAS 12054-48-7	Nickel dihydroxide	30 - 50 %	Acute Toxicity - oral - Category 4. Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Germ cell mutagenicity - Category 2. Carcinogenicity - Category 1A. Reproductive toxicant - Category 1B. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 1313-99-1	Nickel monoxide	30 - 50 %	Sensitization - skin - Category 1. Carcinogenicity - Category 1A. Specific Target Organ Toxicity (Repeated Exposure) - Category 1. Aquatic toxicity - chronic - Category 4.
CAS 1310-58-3	Potassium hydroxide	< 7 %	Corrosive to Metals - Category 1. Acute Toxicity - oral - Category 4. Skin Corrosion - Category 1A.
CAS 7440-48-4	Cobalt	2 - 6 %	Acute Toxicity - oral - Category 4. Acute Toxicity - inhalative - Category 1. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Carcinogenicity - Category 1B. Reproductive toxicant - Category 2. Aquatic toxicity - acute - Category 1 (M-factor = 10). Aquatic toxicity - chronic - Category 1.
CAS 1310-73-2	Sodium hydroxide	0 - 4 %	Corrosive to Metals - Category 1. Skin Corrosion - Category 1A.
CAS 1310-65-2	Lithium hydroxide	0 - 4 %	Acute Toxicity - oral - Category 4. Skin Corrosion - Category 1A.

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

Additional information: The maximum workplace exposure limits are, where necessary, listed in section 8.

4. First aid measures

General information:	In case of damaged battery cases / In case of exposure to hazardous ingredients: Take off immediately all contaminated clothing. First aider: Pay attention to self-protection!
In case of inhalation:	Provide fresh air. Keep victim at rest in half upright position. If breathing has stopped, give artificial respiration immediately. Seek medical attention.

Following skin contact: Immediately clean with water and soap and, if available, apply a generous amount of polyethylene glycol 400 or protective skin cream. Wash contaminated clothing before reuse. Subsequently consult 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. Seek the attention of an ophthalmologist immediately.

After swallowing: Rinse mouth with water. Drink large quantities of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not try to neutralize. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

The battery is hermetically sealed. No hazardous reaction when handled and stored according to provisions.

In case of damaged battery cases / In case of exposure to hazardous ingredients:

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure.

Information to physician

Treat symptomatically. Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:

Dry extinguishing powder

Extinguishing media which must not be used for safety reasons:

Water

Specific hazards arising from the chemical

In case of fire may be liberated: toxic gases/vapors (metal oxide smoke), corrosive gases/vapors, 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:

Exposure to fire may cause containers to rupture/explode.

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

Avoid exposure. Provide adequate ventilation. Eliminate all ignition sources if safe to do so.

In case of damaged battery cases:

Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.

Avoid generation of dust. Do not inhale vapors or dust particles. Avoid contact with skin and eyes.

Avoid contact with liquid and vapor.

Environmental precautions:

Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary. If necessary, notify appropriate authorities.

Methods and material for containment and cleaning up

Methods for clean-up:

In case of damaged battery cases:

Plug leak if safely possible.

Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder.

Store in special closed containers and dispose of according to ordinance.

Additional information:

Avoid short circuit.

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.

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid contact with skin and eyes.

In case of damaged battery cases: Avoid exposure.

Avoid generation of dust. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

Precautions against fire and explosion:

Avoid short circuit. Eliminate all ignition sources if safe to do so.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and dry. Store at room temperature.

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

Storage temperature: 41 °F up to 77 °F

Air humidity: 60% up to 70%

Hints on joint storage:

Do not store together with strong acids, strong oxidizing agents, alkalis, conductive material(s).

Keep away from food, drink and animal feedingstuffs.

Further details:

Avoid damage to the battery casing.

Charging temperature: 32 °F up to 113 °F

Discharging temperature: -4 °F up to 140 °F

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
7440-02-0	Nickel	USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA USA: OSHA: TWA	1.5 mg/m ³ (metal, inhalable fraction) 10 Ni/m ³ 0.015 mg/m ³ 1 mg/m ³ (metal and insoluble compounds) 1 mg/m ³ (metal and soluble compounds)
12054-48-7	Nickel dihydroxide	USA: IDLH: TWA	10 Ni/m ³
7439-89-6	Iron	USA: ACGIH: TWA USA: OSHA: TWA	10 mg/m ³ (smoke, dust) 10 mg/m ³ (Smoke)
1310-58-3	Potassium hydroxide	USA: ACGIH: Ceiling USA: NIOSH: Ceiling	2 mg/m ³ 2 mg/m ³
7440-48-4	Cobalt	USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	0.02 mg/m ³ (inhalable fraction) 20 Co/m ³ (metal; Dusts and Smoke) 0.05 mg/m ³ 0.1 mg/m ³ (metal; Dusts; Smoke)
1310-73-2	Sodium hydroxide	USA: ACGIH: Ceiling USA: IDLH: TWA USA: NIOSH: Ceiling USA: OSHA: TWA	2 mg/m ³ 10 mg/m ³ 2 mg/m ³ 2 mg/m ³
7439-96-5	Manganese	USA: ACGIH: TWA USA: ACGIH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: Ceiling	0.02 mg/m ³ (respirable fraction) 0.1 mg/m ³ (inhalable fraction) 3 mg/m ³ 1 mg/m ³ 5 mg/m ³
7429-90-5	Aluminium	USA: ACGIH: TWA USA: NIOSH: Ceiling USA: NIOSH: TWA USA: NIOSH: TWA USA: OSHA: TWA USA: OSHA: TWA	1 mg/m ³ 5 mg/m ³ (inhalable fraction) 10 mg/m ³ (inhalable fraction) 5 mg/m ³ (inhalable fraction) 15 mg/m ³ (inhalable fraction) 5 mg/m ³ (respirable fraction)
9002-86-2	PVC	USA: ACGIH: TWA	1 mg/m ³ (respirable fraction)

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
7440-02-0	Nickel	USA: ACGIH-BEI, urine	30 µg/L	Nickel after exposure to soluble compounds	end of shift at end of work week
		USA: ACGIH-BEI, urine	5 µg/L	Nickel after exposure to elemental Nickel and poorly soluble compounds	end of shift at end of work week
7440-48-4	Cobalt	USA: ACGIH-BEI, urine	15 µg/L	Cobalt; not combined with Tungsten Carbide	end of shift at end of work week

Additional information: The battery is hermetically sealed.

Appropriate engineering controls

In case of damaged battery cases: Provide adequate ventilation.
The use of local exhaust ventilation is recommended.

Personal protection equipment (PPE)

Respiratory protection: In case of damaged battery cases:
For short or minimal exposure: respiratory filter; in cases of longer exposure: supplied air respirator.
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: In case of damaged battery cases:
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: nitrile rubber or neoprene.
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.

Body protection: In case of damaged battery cases:
Wear appropriate protective equipment.

General hygiene considerations:
Keep away from sources of ignition - No smoking.
Avoid contact with skin and eyes. Take off immediately all contaminated clothing.
Safety shower and eye wash station should be easily accessible to the work area.
When using do not eat or drink. Wash hands before breaks and after work.
Keep away from food, drink and animal feedingstuffs.
In case of damaged battery cases:
Do not inhale vapors or dust particles. Avoid contact with the product.

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	solid
Color:	Form: Cells: 5 (plastic casing) beige
Odor:	No data available
Odor threshold:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flammability:	No data available
Explosion limits:	No data available
Flash point/flash point range:	Not applicable
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	Not applicable
Viscosity:	No data available
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	No data available
Density:	No data available
Vapor density:	No data available
Particle characteristics:	No data available

Additional information

Additional information:	Weight: approx. 80 g
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10. Stability and reactivity

Reactivity:	In case of damaged battery cases: May be corrosive to metals.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Fire hazard in case of technical defects. In case of damaged battery cases: Information about Potassium hydroxide and Sodium hydroxide: Reacts with metals and light metals. Formation of hydrogen. Danger of explosion!
Conditions to avoid:	Humidity, heat, UV-radiation/sunlight. Avoid short circuit. In case of damaged battery cases: Keep away from sources of ignition - No smoking.
Incompatible materials:	Strong acids, strong oxidizing agents, alkalis, conductive material(s).

11. Toxicological information

Information on toxicological effects

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:

- In case of damaged battery cases:
- Harmful if swallowed or if inhaled.
- Causes severe skin burns and eye damage.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child.
- Causes damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity

Aquatic toxicity:

- In case of damaged battery cases:
- Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Further details:

- No data available

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.
- Avoid spills and leaks. Very small amounts contaminates drinking water.

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.

14. Transport information

UN number

DOT: UN3496

IMDG, IATA-DGR: UN 3496

UN proper shipping name

DOT, IMDG, IATA-DGR: UN 3496, BATTERIES, NICKEL-METAL HYDRIDE

Transport hazard class(es)

DOT: 9

IMDG: Class 9, Subrisk -

IATA-DGR: Class 9



Packing group

DOT, IATA-DGR: not applicable

IMDG: -

Environmental hazards

Marine pollutant: no

Transport in bulk according to IMO instruments

No data available

Special precautions for user

USA: Department of Transportation (DOT)

Labels: 9

Symbols: W

Special Provisions: 340

Vessel stowage – Location: A

Vessel stowage – Other: 25

Sea transport (IMDG)

EmS:	F-A, S-I
Special Provisions:	117 963
Limited quantities:	0
Excepted quantities:	E0
Package - Instructions:	See SP963
Package - Provisions:	-
IBC - Instructions:	IBC08
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	-
Tank instructions - Provisions:	-
Stowage and handling:	Category A. SW1
Properties and observations:	Nickel-metal hydride cells or batteries packed with or contained in equipment and nickel-metal hydride button cells are not subject to provisions of this code.
Marine pollutant:	no
Segregation group:	none

Air transport (IATA)

Proper shipping name:	UN 3496, BATTERIES, NICKEL-METAL HYDRIDE
Passenger and Cargo Aircraft: Ltd.Qty.:	Forbidden
Passenger and Cargo Aircraft:	Pack.Instr. SeeA199 - Max. Net Qty/Pkg. SeeA199
Cargo Aircraft only:	Pack.Instr. SeeA199 - Max. Net Qty/Pkg. SeeA199
Special Provisions:	A199
Emergency Response Guide-Code (ERG):	9L

15. Regulatory information

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

Nickel:	California Proposition 65: cancer New York Right-To-Know: listed
Nickel dihydroxide:	California Proposition 65: cancer New York Right-To-Know: listed
Nickel monoxide:	California Proposition 65: cancer
Potassium hydroxide:	New York Right-To-Know: listed
Cobalt:	California Proposition 65: cancer New York Right-To-Know: listed
Sodium hydroxide:	New York Right-To-Know: listed

Further regulations, limitations and legal requirements

No data available

16. Other information

Revision date: 3/2/2026
Date of first version: 1/17/2017
Reason of change: Changes in section 8: Biological Limit Value
Hazard rating systems:



NFPA Hazard Rating:

Health: 0 (Minimal)

Fire: 1 (Slight)

Reactivity: 1 (Slight)

HMIS Version III Rating:

Health: 0 (Minimal)

Flammability: 1 (Slight)

Physical Hazard: 1 (Slight)

Personal Protection: X = Consult your supervisor

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	1
	X

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity
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
Carcinogenicity: Carcinogenicity
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
Corrosive to Metals: Corrosive to metals
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
DOT: Department of Transportation's Safety Regulations (USA)
EC: European Community
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
Eye Irritation: Eye irritation
Germ cell mutagenicity: Mutagenicity
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
M-factor: Multiplication factor
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
Reproductive toxicant: Reproductive toxicity
Respiratory Sensitizer: Sensitisation to the respiratory tract
Sensitization - skin: Skin sensitisation
Skin Corrosion: Skin corrosion
Skin Irritation: Skin irritation
STOT RE: Specific target organ toxicity - repeated exposure
TRGS: Technical Rules for Hazardous Substances
TSCA: Toxic Substance Control Act
UN: United Nations
UV: Ultraviolet
vPvB: Very persistent and very bioaccumulative

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.