



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 13.02.2019

Version number 1

Revision: 13.02.2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Bateries Lithium Manganese Dioxide
Lithium Manganese Dioxide Batteries
- **Article number / formula:** CR1/3N CR2 CR123A CR14250 CR17450
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation :** Battery
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SEPTODONT.
58 rue du Pont de Creteil
94100 Saint Maur des Fosses
France
Téléphone: +33(0)149767000
Fax: +33(0)148855401
msds@septodont.com
http://www.septodont.com
- **1.4 Emergency telephone number:**
France (INRS 24h/24) - Tel : +33 (0)1 45 42 59 59
Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24) EU Tel: 112
Belgique - Tel : 32 070/245 245
UK : Call NHS 999 in a medical emergency. If you urgently need medical help or advice but it's not a life-threatening situation, call 111 (24/7). The NHS 111 number is currently only available in certain areas. If you're outside of these areas, you should call NHS Direct on 0845 4647

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008 :**
The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Not classified as hazardous
- **Hazard pictograms** Not classified as hazardous
- **Signal word** Not classified as hazardous
- **Hazard statements** Not classified as hazardous
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Solid battery composed by :

Dangerous components:

CAS: 7439-93-2 EINECS: 231-102-5 Index number: 003-001-00-4 RTECS: OJ 5540000	lithium ⚠ Water-react. 1, H260; ⚠ Skin Corr. 1B, H314	3-4%
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**Trade name: Bateries Lithium Manganese Dioxide
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CAS: 7782-42-5 EINECS: 231-955-3	Graphite substance with a Community workplace exposure limit	2-3%
CAS: 1313-13-9 EINECS: 215-202-6 Index number: 025-001-00-3 RTECS: OP 0350000	manganese dioxide ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	35-45%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-002-00-1 Reg.nr.: 01-2119529243-45-0203	aluminium powder (stabilised)	2%
CAS: 110-71-4 EINECS: 203-794-9 Index number: 603-031-00-3 RTECS: KI 1451000	1,2-dimethoxyethane ⚠ Flam. Liq. 2, H225; ⚠ Repr. 1B, H360FD; ⚠ Acute Tox. 4, H332	7%
CAS: 108-32-7 EINECS: 203-572-1 Index number: 607-194-00-1 RTECS: FF 9650000	propylene carbonate ⚠ Eye Irrit. 2, H319	7%
CAS: 7791-03-9 EINECS: 232-237-2	lithium perchlorate ⚠ Ox. Sol. 1, H271; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	1-1.5%
CAS: 9003-07-0	Polypropylene	3%
CAS: 9002-84-0	Polytetrafluoroethylene	5%
CAS: 7439-89-6 EINECS: 231-096-4 RTECS: NO 4565500 Reg.nr.: 01-2119462838-24-XXXX	iron	25-30%
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7 Reg.nr.: 01-2119438727-29-0000	nickel ⚠ Self-heat. 1, H251; ⚠ Carc. 2, H351; STOT RE 1, H372; ⚠ Skin Sens. 1, H317	1%

· **SVHC**

CAS: 110-71-4 | 1,2-dimethoxyethane

· **Additional information:** For the wording of the listed risk phrases, refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

- **General information:** No special measures required.
- **After excessive inhalation:** Provide fresh air; consult a doctor in case of medical complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult a doctor.

· **4.2 Most important symptoms and effects, both acute and delayed :**

No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed :**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture :** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures :** Remove unprotected persons.
- **6.2 Environmental precautions:** Do not allow the product to enter sewers/ surface water or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections :**
See Section 7 for information on safe handling.
See Section 8 for information on personal protective equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling :** Keep away from heat and direct sunlight.
- **Information about fire - and explosion protection:** Protect from heat.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from humidity and water.
- **7.3 Specific end use(s) :** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 1313-13-9 manganese dioxide (10-25%)	
WEL (Great Britain)	Long-term value: 0.5 mg/m ³ as Mn
MAK (Switzerland)	Long-term value: 0.5e mg/m ³ B, P, SSc; als Mn berechnet
CAS: 115-10-6 dimethyl ether (5-10%)	
WEL (Great Britain)	Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 400 ppm

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IOELV (EU)	Long-term value: 1920 mg/m ³ , 1000 ppm
MAK (Switzerland)	Long-term value: 1910 mg/m ³ , 1000 ppm
CAS: 646-06-0 1,3-dioxolane (5-10%)	
MAK (Switzerland)	Long-term value: 62 mg/m ³ , 20 ppm H SSc;
CAS: 7782-42-5 Graphite (<5%)	
MAK (Switzerland)	Long-term value: 2.5 a 5 e mg/m ³ SSc;
CAS: 29935-35-1 lithium hexafluoroarsenate (<5%)	
WEL (Great Britain)	Long-term value: 0.1 mg/m ³ as As; Carc
CAS: 7791-03-9 lithium perchlorate (≤5%)	
MAK (Switzerland)	Short-term value: 0.2 e mg/m ³ Long-term value: 0.2 e mg/m ³ SSc;als Li

· Ingredients with biological limit values:

CAS: 1313-13-9 manganese dioxide (10-25%)	
BAT (Switzerland)	20 µg/l Medium: B Sampling time: c,b Parameter: Mangan
CAS: 29935-35-1 lithium hexafluoroarsenate (<5%)	
BAT (Switzerland)	50 µg/l Medium: U Sampling time: c,b Parameter: anorganisches Arsen und methylierte Metaboliten

· Additional information:

The most current valid lists have been used as a basis for the production of this document.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

· Respiratory protection: Not required.

· Protection of hands: Not required.

· Gloves material : -

· Eye protection: Not required.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solid
Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

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· pH-value:	<i>Not applicable.</i>
· Change in condition	
Melting point/freezing point:	<i>Undetermined.</i>
Initial boiling point and boiling range:	<i>Undetermined.</i>
· Flash point:	<i>Not applicable.</i>
· Flammability (solid, gas):	<i>Not determined.</i>
· Ignition temperature:	<i>Not applicable.</i>
· Decomposition temperature:	<i>Not determined.</i>
· Auto-ignition temperature:	<i>Product is not self igniting.</i>
· Explosive properties:	<i>Product does not present an explosion hazard.</i>
· Explosion limits:	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
· Vapour pressure:	<i>Not applicable.</i>
· Density:	<i>Not determined.</i>
· Relative density :	<i>Not determined.</i>
· Vapour density :	<i>Not applicable.</i>
· Evaporation rate :	<i>Not applicable.</i>
· Solubility in / Miscibility with water:	<i>Insoluble.</i>
· Segregation coefficient (n-octanol/water):	<i>Not determined.</i>
· Viscosity:	
Dynamic:	<i>Not applicable.</i>
Kinematic:	<i>Not applicable.</i>
Kinematic:	<i>Not applicable.</i>
· 9.2 Other information :	<i>No further relevant information available.</i>

SECTION 10: Stability and reactivity

- **10.1 Reactivity** *No further relevant information available.*
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **10.3 Possibility of hazardous reactions :** *No dangerous reactions known.*
- **10.4 Conditions to avoid :** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** *Based on available data, the classification criteria are not met.*

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· LD/LC50 values relevant for classification:
CAS: 7439-89-6 iron

Oral	LD50	30 mg/kg (rat)
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CAS: 1313-13-9 manganese dioxide

Oral	LD50	500 mg/kg (ATE)
------	------	-----------------

Inhalative	LC50/4 h	1.5 mg/l (ATE)
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CAS: 7791-03-9 lithium perchlorate

Oral	LD50	500 mg/kg (ATE)
------	------	-----------------

CAS: 646-06-0 1,3-dioxolane

Oral	LD50	3,000 mg/kg (rat)
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Dermal	LD50	8,480 mg/kg (rabbit)
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Inhalative	LC50/4 h	20,650 mg/l (rat)
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CAS: 108-32-7 propylene carbonate

Oral	LD50	29,000 mg/kg (rat)
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CAS: 110-71-4 1,2-dimethoxyethane

Oral	LD50	5,370 mg/kg (rat)
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Inhalative	LC50/4 h	1.5 mg/l (ATE)
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CAS: 9002-86-2 polyvinyl chloride

Inhalative	LC50/4 h	140 mg/l (rat)
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CAS: 1333-86-4 Carbon black

Oral	LD50	10,000 mg/kg (rat)
------	------	--------------------

CAS: 9002-84-0 Polytetrafluoroethylene

Oral	LD50	>11,280 mg/kg (rat)
------	------	---------------------

CAS: 7782-42-5 Graphite

Oral	LD50	>2,000 mg/kg (rat)
------	------	--------------------

Inhalative	LC50/4 h	>2,000 mg/l (rat)
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CAS: 7440-02-0 nickel

Oral	LD50	>9,000 mg/kg (rat)
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· Primary irritant effect:

· **On the skin:** Based on available data, the classification criteria are not met.

· **On the eyes:** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitization** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 108-32-7 propylene carbonate

LC50 96h 5,300 mg/l (fish)

NOEC 900 mg/l (Algae)
(72h)

EC50 72h >900 mg/l (Algae)

EC50 48h >500 mg/l (daphnia)

CAS: 7782-42-5 Graphite

EC50 72h >100 mg/l (Algae)

EC50 48h >100 mg/l (daphnia)

CAS: 7440-02-0 nickel

EC50 48h 1 mg/l (daphnia)

· **12.2 Persistence and degradability** : No further relevant information available.

· **12.3 Bioaccumulative potential** : No further relevant information available.

· **12.4 Mobility in soil** : No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water



Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT**: Not applicable.

· **vPvB**: Not applicable.

· **12.6 Other adverse effects** : No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation** : Smaller quantities can be disposed of with household waste.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN3091

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· 14.2 UN proper shipping name

· ADR

UN3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

· IMDG, IATA

LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT

· 14.3 Transport hazard class(es)

· ADR



· Class

9 Miscellaneous dangerous substances and articles.

· Label

9

· IMDG



· Class

9 Miscellaneous dangerous substances and articles.

· Label

9A

· IATA



· Class

9 Miscellaneous dangerous substances and articles.

· Label

9A



PI 967 Section II

IMP: ELI

Limit per package :

Pax A/C = 5 Kg

CAO = 5 Kg

· 14.4 Packing group

· ADR, IMDG, IATA

Not classified as hazardous for transport

· 14.5 Environmental hazards:

· Marine pollutant:

No

· 14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

· EMS Number:

F-A,S-I

· Stowage Category

A

· Stowage Code

SW19 For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage.

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

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· Transport/Additional information:

· ADR

- **Limited quantities (LQ)** 0
- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

· IMDG

- **Limited quantities (LQ)** 0
- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

· UN "Model Regulation":

UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT, 9

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H225 Highly flammable liquid and vapour.
- H251 Self-heating: may catch fire.
- H260 In contact with water releases flammable gases which may ignite spontaneously.
- H271 May cause fire or explosion; strong oxidiser.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H360FD May damage fertility. May damage the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.

· Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic

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SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Self-heat. 1: Self-heating substances and mixtures – Category 1

Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1

Ox. Sol. 1: Oxidizing solids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

GB