

Material Safety Data Sheet (GHS)

Issue Date: 2018-12-18

Battery corpuls aed

Version 2.0

SAFETY DATA SHEET (SDS)

according to

Regulation (EC) No 1907/2006 (REACH), Article 31**CONTENT (by Sections)**

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Section 1 · IDENTIFICATION**PRODUCT DESCRIPTION**

Battery Pack (LiMn) 12V/4.8Ah

Art. No.: 06120

PRODUCT NAMR

Li-Mn Battery 12V 4,8Ah 57,6Wh

PRODUCT IDENTIFICATION

Item	Nominal Value
Cell model name	CR17450EG
Cell type	Manganese Dioxide Lithium
Cell Nominal Voltage	3.0 V
Cell Nominal Capacity	2,400 mAh
Cell Lithium Contents	0.83 g
Cell Watt hour rating	7.2 Wh
Cell Weight	23.0 g
Cell quantity per battery pack	8 pieces
Cell arrangement	4 in series / 2 in parallel
Battery packs per device	1 piece
Designed for Recharge	No

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PRODUCT USE

■ Battery


NOTE: MSDS are intended for use in the workplace. For domestic-use products, refer to consumer labels.

NOTE: Hazard statement relates to battery contents. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically or electrically abused.

MANUFACTURER / SUPPLIER

	CELL MANUFACTURER	Battery Supplier	Battery Legal Manufacturer (Supplier of Safety Data Sheet)
Company	FDK CORPORATION	DYNAMIS Batterien GmbH	GS Elektromedizinische Geräte G. Stemple GmbH
Address	1-6-41, Konan, Minato-ku, Tokyo 108-8212 Japan	Brühlstr. 15 78465 Dettingen/Konstanz Germany	Hauswiesenstrasse 26 86916 Kaufering Germany

EMERGENCY CONTACT INFORMATION

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Company	FDK CORPORATION	GS Elektromedizinische Geräte G. Stemple GmbH
Address	1-6-41, Konan, Minato-ku Tokyo 108-8212 Japan	Hauswiesenstrasse 26 86916 Kaufering Germany
	Tel.: +81-3-5715-7435	Tel.: (+49) 8191-65722-0 Fax: (+49) 8191-65722-22

Section 2 · HAZARDS IDENTIFICATION**CLASSIFICATION OF HAZARDOUS CHEMICAL**

Not applicable.

The batteries herein are defined as "articles" under 29 CFR 1910.1200. The batteries are not classified as hazardous according to Regulation (EC) No. 1272/2008.

CLASSIFICATION OF HAZARD CLASS

Class 9 – Miscellaneous Dangerous Goods

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HAZARD IDENTIFICATION

The battery ingredients are contained in a sealed enclosure. Therefore, it is not classified as dangerous or hazardous under normal use. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of dismantling the enclosure. If this occurs, exposure to the electrolyte solution within can occur by Inhalation, Ingestion, Eye contact and Skin contact. Damaged or opened cells or batteries may result in rapid heat release, and the release of flammable vapors.

ROUTES OF ENTRY – NORMAL USE

- Skin contact: No
- Skin absorption: No
- Eye contact: No
- Inhalation: No
- Ingestion: No

Section 3 · COMPOSITION / INFORMATION ON INGREDIENTS

The materials contained in the battery may only become a hazard if the battery cell is disintegrated or if the battery cell is mechanically, thermally or electrically abused.

Ingredients	%	CAS Number
Manganese Dioxide	30-45	1313-13-9
Lithium metal	3-4	7439-93-2
1,2-Dimethoxyethane	6-8.5	110-71-4
Calcium carbonate	5-10	471-34-1
Mixture of organic solvent	3-10	N/A

Section 4 · FIRST-AID MEASURES

If exposure to internal materials within cell due to damaged outer casing, the following actions are recommended.

EYE CONTACT

If ingredients from inside the battery come into contact with the eyes immediately rinse the eyes with plenty of water for at least 15 minutes. Do not rub the eyes. Seek medical attention.

SKIN CONTACT

If ingredients from inside the battery come into contact with the skin thoroughly wash the area with soap and water and seek medical attention.

INHALATION OF VENTED GAS

If ingredients from inside the battery are inhaled remove to fresh air. Get medical attention.

INGESTION

If ingredients from inside the battery are swallowed get medical attention immediately.

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Section 5 · FIREFIGHTING MEASURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

Toxic gases (HF, PF6) will be formed if cells or batteries are involved in a fire. Cells or batteries may flame or leak potentially hazardous organic vapors if exposed to excessive heat, fire or over-voltage conditions. Damaged or opened cells or batteries may result in rapid heating and the release of flammable vapors.

EXTINGUISHING MEDIA

Dry chemical, alcohol-resistant foam, powder, atomized water, carbon dioxide and dry sand are effective.

FIREFIGHTING INSTRUCTIONS

If possible, remove cell(s) from firefighting area. If heated above 100 °C, cell(s) can explode/vent.

FIREFIGHTING EQUIPMENT

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

Section 6 · ACCIDENTAL RELEASE MEASURES

The material contained within the batteries would only be expelled under abusive conditions. Using shovel or broom, cover battery or spilled substances with dry sand or vermiculite, place in approved container (after cooling if necessary) and dispose in accordance with local regulations.

On Land: Place material into suitable containers and call local fire/police department.

In Water: If possible, remove from water and call local fire/police department.

Section 7 · HANDLING AND STORAGE

HANDLING

Battery Disassembly

Never disassemble a battery. Should a battery unintentionally be crushed, thus releasing its contents, rubber gloves must be used to handle all battery components. Avoid inhalation of any vapors that may be emitted.

Battery Short Circuit

Do not short-circuit a battery. A short circuit can result in over-heating of the terminals and provide an ignition source.

More than a momentary short circuit will generally reduce the cell or battery service life and can lead to ignition of surrounding materials or materials within the cell or battery if the seal integrity is damaged.

Extended short-circuiting creates high temperature in the cell and at the terminals. Physical contact to high temperatures can cause skin burns. In addition, extended short-circuit may cause the cell or battery to flame.

Avoid reversing cell polarity within a battery assembly. Reversing cell polarity may cause the cell or battery to flame or to emit gases.

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STORAGE

- Store batteries in well-ventilated, dry and cool conditions.
- Keep away from water, rain, snow, frost or dew condensation.
- Do not store batteries near source of heat or nozzle of hot air.
- Do not store batteries in direct sunshine.
- Take care not to get wet packing by dew condensation when packing is removed from cold to warm and humid condition.

Section 8 · EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION

Not necessary under normal use. In case of battery rupture, use self-contained full-face respiratory equipment.

HAND PROTECTION

Not necessary under normal use. Use Viton rubber gloves if handling a leaking or ruptured battery.

EYE PROTECTION

Not necessary under normal use. Wear safety goggles or glasses with side shields if handling a leaking or ruptured battery.

SKIN PROTECTION

Not necessary under normal use. Use rubber apron and protective working in case of handling of a ruptured battery.

Section 9 · PHYSICAL AND CHEMICAL PROPERTIES

The batteries described in this Safety Data Sheet are sealed units which are not hazardous when used according to the recommendations of the manufacturer. Under normal conditions of use, the solid electrode materials and Gel electrolyte they contain are non-reactive provided the battery integrity is maintained and seals remain intact.

State: Solid

Odor: N/A

Vapor pressure: N/A

Vapor density: N/A

Boiling point: N/A

Solubility in water: Insoluble

Specific gravity: N/A

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Density: N/A

pH: N/A

Section 10 · STABILITY AND REACTIVITY

CONDITIONS TO AVOID

Heat above 100 °C or incinerate. Do not deform, mutilate, crush, pierce, disassemble, or short-circuit the battery. Avoid prolonged exposure to humid conditions.

MATERIALS TO AVOID

N/A

Section 11 · TOXICOLOGICAL INFORMATION

Under normal conditions, when properly used or disposed, all materials are contained inside the battery and release of ingredients does not occur. In case of accidental release see information in sections 2, 3 and 4.

Section 12 · ECOLOGICAL INFORMATION

Under normal conditions, when properly used or disposed, all materials are contained inside the battery and pose no risk to persons or the surrounding environment.

Section 13 · DISPOSAL CONSIDERATIONS

Dispose of batteries according to all federal, state, and local regulations.

Section 14 · TRANSPORTATION INFORMATION

Proper shipping name: Lithium Metal Batteries packed with / contained in equipment

UN No.: UN3091

Classification of Hazard Class: Class 9 – Miscellaneous Dangerous Goods

IATA DGR, Packing Instruction: 969 – 970

The battery has passed the tests according to the UN Manual of Test and Criteria, Part III, subsection 38.3.

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Section 15 · REGULATORY INFORMATION

TSCA Status: all ingredients in the battery are listed on the TSCA inventory.

The batteries are not classified as hazardous according to Regulation (EC) No. 1272/2008.

OSHA hazard communication standard (29 CFR 1910.1200): Non-hazardous

Section 16 · OTHER INFORMATION

Legal Manufacturer Disclaimer

The information contained herein is based on the data available to us and believed to be correct. However, GS Elektromedizinische Geräte G. Stemple GmbH makes no warranty, expressed or implied. Users should consider the data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

Legal remark (EU)

These batteries are no “substances” or “mixtures” according to Regulation (EC) No 1907/2006 EC. Instead they have to be regarded as “articles”, no substances are intended to be released during handling. Therefore, there is no obligation to supply a “safety data sheet according to Regulation (EC) 1907/2006, Article 31”.