

Battery Information Sheet

Dry silver chloride/magnesium module

According to REACH regulation (EC 1907/2006, Art 31) and to OSHA regulation (29 CFR 1910.1200), batteries are **ARTICLES** with no intended release. As such, they are not covered by legal requirements to generate and supply an SDS or an MSDS.

This Battery Information Sheet is provided solely as an information document for the purpose of assisting our customers.

1. IDENTIFICATION

1.1 Product

Dry silver chloride/magnesium module (without soaking system nor electrolyte).

1.2 Supplier

Headquarters Address Phone/Fax	Saft S.A.S. 26, Quai Charles Pasqua, 92300 Levallois Perret– France Phone/Fax: +33 (0)1 49 93 19 18 /+33 (0)1 49 93 19 50
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1.3 Emergency contact Chemtrec US Service within the USA: +1 800 424 93 00/outside : +1-703 527 3887

2. HAZARD IDENTIFICATION

Not chemically dangerous with normal use in accordance with Saft recommendations as stated in the user manuals or other similar documentation. In particular, the battery should not be opened nor burned. Exposure to/Ingestion of the ingredients contained within or their combustion products could be harmful.

Chemical substances composing the module are hermetically contained within the module casing. In case of non-controlled soaking water, sea water..., the module is no longer stable and can be dangerous (hydrogen evolution, thermal runaway, explosion, risk of fire (presence of Magnesium, flammable solid) electrical hazard with voltage comprised between 250V and 400 V...).

EYE CONTACT: Contents of an opened module (dust) within a battery can cause eye irritations.

SKIN CONTACT: Contents of an opened module (dust) within a battery can cause skin irritations.

INHALATION: Contents of an opened module can cause respiratory tract and mucus membrane irritation (nose and throat).

ENVIRONMENTAL IMPACT: Very toxic to aquatic life.



TEMPERATURE: Do not place the batteries on or near fires.

3. COMPOSITION, INFORMATION OR INGREDIENTS

3.1 At cell level

N/A.

3.2 At module and battery system level

Component	CAS Number	EINECS/ELINCS	Content (wt. %) *
Silver Chloride	7783-90-6	232-033-3	67-69 %
Magnesium	7439-95-4	231-104-6	11-13%**
<i>Lead</i>	7439-92-1	231-100-4	<5%**
Metallic and inert material	N/A	N/A	8%
Non-metallic material	N/A	N/A	6-8 %***

* Quantities may vary a little with cell model

** The Magnesium contain <5% Lead (CAS 7439-92-1) listed on candidate list since September 2018

4. HANDLING AND STORAGE

IMPORTANT NOTICE: The battery should not be opened without Saft approval, destroyed nor incinerated since the ingredients contained in the cells could be harmful under some circumstances if exposed.

HANDLING :

- The module and its packaging must be handled with care to avoid any damage to the protective cover and the module.
- The module must be handled with its protective cover and its straps.
- Do not short (+) or (-) terminal with conductors/conductive materials.
- Do not open the modules.
- Do not expose the module to water or condensation.
- Do not directly heat, solder, or throw into fire. Such unsuitable use can cause toxic fumes and dust.

STORAGE :

- Store between -40°C to 70°C, dry (< 80%) and ventilated area. Keep batteries in original packaging until use and do not jumble them.

5. PHYSICAL AND CHEMICAL PROPERTIES

The dry silver chloride/magnesium module described by this Battery Information Sheet is a sealed unit when offered for sale. It is a manufactured “article” and does not expose the user to hazardous chemicals when used in accordance with manufacturer specifications.

Boiling Point – Not applicable
Vapor Pressure – Not applicable
Specific Gravity – Not applicable

Melting Point – Not applicable
Vapor Density – Not applicable

6. STABILITY AND REACTIVITY – the battery system is stable when handled and stored according to section 4

MATERIALS TO AVOID:

Materials contained in these cells react with various types of chemicals such as Alkali fluids, strong acids or bases, oxidizing agents and sea water

CONDITIONS TO AVOID:

Avoid moisture, contact with water, exposure to moisture or water, prolonged exposure to air.

Avoid exposing battery to fire.

Avoid exposing battery to direct sunlight and avoid external heating or low temperatures.

Do not disassemble, crush or short.

Avoid mechanical or electrical abuse.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition of the module produces harmful and toxic fumes and dusts. (such as metals and metals compounds, lead fumes, carbon oxides, magnesium oxide and magnesium nitride)

Magnesium in contact with water will lead to hydrogen evolution.

7. TOXICOLOGICAL INFORMATION

Risk of irritation occurs only if the module is mechanically or thermally abused to the point of compromising the enclosure.

8. ECOLOGICAL INFORMATION

There is no ecological harm when modules are used correctly and recycled after use has ended.

In case of mechanical abuse of the module container, active material is very toxic to aquatic life (acute and chronic toxicity). Any contact with aquatic life must be avoided.

9. DISPOSAL CONSIDERATIONS

Battery recycling is either mandatory (European Directive 2006/66/EC) or recommended.

Batteries should be fully discharged prior to disposal and terminals protected.

Dispose in accordance with local laws and regulations. Store material for disposal as indicated in Section 4.

Do NOT dump into any sewers, on the ground or into any body of water.

Disposal considerations: See the section on "Sustainability & Environment" on <http://www.saftbatteries.com>

10. TRANSPORTATION INFORMATION

Important: Dry silver chloride/magnesium modules (V616 & V616SE) are not classified under transportation regulation. Modules must be transported in the specific packaging provided by SAFT.

10.1 United Nations Class

Class UN N°:	N/A
Hazard Classification:	N/A
Classification	N/A
Packaging:	N/A

10.2 International agreements

By Air International:	N/A
By Sea International:	N/A
European road transportation:	N/A
European rail transportation:	N/A

11. REGULATORY INFORMATION

Marking Consideration

European Union: According to directive 2006/66/EC, the batteries have to be marked with the crossed wheel bin symbol.

12. FIRST AID MEASURES (not anticipated under normal use)

EYE CONTACT: Rinse immediately with copious amount of water for more than 15 minutes. Seek immediate medical attention.

SKIN CONTACT: Remove contaminated clothing and rinse affected areas with plenty of water for at least 15 minutes. Seek immediate medical attention.

INHALATION: Remove to fresh air and seek immediate medical attention.

INGESTION: Clear mouth with water. Do not induce vomiting. Seek immediate medical attention.

13. FIRE FIGHTING MEASURES (not anticipated under normal use)

EXTINGUISHING MEDIA: Foam. Dry Powder. Sand. Carbon dioxide (CO₂)

FOR SAFETY REASONS UNSUITABLE EXTINGUISHING AGENTS: DO NOT use water





SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear self-contained breathing apparatus.

Use approved / certified vapour respirator to avoid breathing toxic fumes. Wear protective clothing and equipment to prevent potential body contact with dust and fumes. It is permissible to use any class of extinguishing medium, specified above, on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

PARTICULAR HAZARDS RESULTING FROM EXPOSURE TO THE SUBSTANCE/PREPARATION, TO COMBUSTION AND GAS PRODUCTS:

When magnesium burns in air, it decomposes to form magnesium oxide and magnesium nitride. Nitrides react with water to generate ammonia.

14. EXPOSURE CONTROLS AND PERSONAL PROTECTION* (not necessary under normal use)

	Respiratory protection	In case of incident, fumes or dust formation, use gas mask which covers the whole face and equipped with N100 or P3 type filters or escape mask type Self-Contained Breathing Apparatus. Fire fighters should wear self-contained breathing apparatus.
	Hand protection	Use polypropylene, polyethylene, rubber or Viton gloves when handling ruptured modules. Take off gloves without being in contact with the polluted side. Dispose all contaminated protections according to applicable regulation. Wash hands after any handling.
	Eye protection	In case of incident or after an abusive use, in case of a module opening, wear safety glasses with protected side shields or a mask covering the whole face when handling ruptured cells.
	Other	In the event of leakage or ruptured cells, wear a rubber apron and protective clothes.

*AFNOR pictograms

15. ACCIDENTAL RELEASE MEASURES (not anticipated under normal use)

INDIVIDUAL PRECAUTIONS:

Evacuate the employees from the contaminated area until fumes or dust dispersal. Do not inhale fumes or dust without adequate respiratory protection. In case of skin or eye contact, inhalation or ingestion, follow the measured described in section 12.

ENVIRONMENTAL PRECAUTION: Avoid sewage, surface water and underground water contamination. Avoid ground and atmosphere contamination. In case of water contamination, alert competent authorities.

WAYS OF CLEANING: Collect all material dispersed using appropriate personal protection, store in appropriate waste packaging and dispose of as special waste in accordance with local regulations.

16. OTHER INFORMATION

This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, neither exhaustively nor perfect reliability can be granted. Information does not imply implicit or specific warranty of it.

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