

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016



## 1. Identification of the substance or preparation and of the company

### 1.1 Commercial product name:

cedis premium hearing aid batteries

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

---

### 1.2 Use of the substance/the preparation

---

### 1.3 Company/undertaking identification

Manufacturer/distributor: egger Otoplastik+Labortechnik GmbH

Street/POB-No.: Aybühlweg 59

Postal code/city/country: 87439 Kempten/Germany

Telephone: +49 831 58113-60

Telefax: +49 831 58113-14

Internet: www.egger-labor.com

E-mail: sales@egger-labor.de

Emergency number: Munich, Germany, toxicological dep. of the II. Med. Hospital) +49 89 19240

### 1.4 Further information

Voltage: 1.4 V

Electrochemical system: Zinc | KOH electrolyte | oxygen

Anode (negative electrode): Zinc

Cathode (positive electrode): MnO<sub>x</sub> catalyst

#### Legal Remark (U.S.A.)

Safety Data Sheets are a sub-requirement of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR Subpart 1910.1200. This Hazard Communication Standard does not apply to various subcategories including anything defined by OSHA as an "article". According to OSHA, Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard.

#### 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".

#### General remark

This Safety Data Sheet is provided as a service to our customers. The details presented are in accordance with our present knowledge and experiences. They are no contractual assurances of product attributes.



**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

## 2. Hazard identification/Labeling

A sealed zinc/air button cell is not hazardous in normal use (as defined in chapter 7).

In case of mistreatment (prolonged deep discharge, charge, reverse charge, external short circuit...) and in case of fault, some electrolyte can leak from the cell through the air holes. In these cases refer to the risk of potassium hydroxide solution (corrosive, pH > 14). Charging may cause rupture. The electrode materials are only hazardous, if the materials are released by mechanical damaging of the cell or if exposed to fire.

### 2.1 Classification

Classification according to 67/548/EEC, 1999/45/EC:

---

Classification according to Regulation (EC) No 1272/2008:

---

### 2.2 Labeling

Labeling according to 67/548/EEC, 1999/45/EC:

---

Labeling according to Regulation (EC) No 1272/2008:

---

Signal word: ---

Danger symbol: ---

Hazard statements: ---

Precautionary statements: ---

Additional information: ---

Other hazards: ---

## 3. Composition/information on ingredients

### 3.1 Chemical characterization (mixtures)

Description:

---

### 3.2 Ingredients:

Ingredients Contents	CAS No.	Hazard Categories	Hazard Statements	Material
18 - 44 %	7440-66-6	Aquatic Chronic 1	H410	Zinc
0,01 - 0,03 %	7439-92-1	Repr. 1A Acute Tox. 4	H360D H332 H302	Lead
		STOT RE 2	H373	
13 - 40 %	1313-13-9	Aquatic Chronic 1 Acute Tox. 4	H410 H302 H332	Manganese dioxide
1 - 3 %	1310-58-3	Acute Tox. 4 Skin Corr. 1A	H302 H314	Potassium hydroxide

Full text of Hazard statements: see section 16.

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

### Heavy Metals

**Contents**

< 5 mg/kg

< 5 mg/kg

< 5 mg/kg

**CAS No.**

7440-43-9

7439-97-6

**Material**

Cadmium

Mercury (none intentionally introduced, see Chapter 12)

Polymers

### Other ingredients

**Contents**

27 - 70 %

2 - 5 %

2 - 7 %

**CAS No.**

**Material**

Nickel plated steel

Copper

Polymers

## 4. First aid measures

### 4.1 General information

---

### 4.2 After inhalation

Fresh air. Seek for medical assistance.

### 4.3 After contact with the skin

Flush affected areas with plenty of water. Remove contaminated cloth immediately. Seek for medical assistance.

### 4.4 After contact with the eyes

Flush the eye gently with plenty of water (at least 15 minutes). Seek for medical assistance.

### 4.5 After swallowing

Drink plenty of water. Avoid vomiting. Seek for medical assistance. No trials for neutralization.

### 4.6 Autoprotection of the first assistant

---

### 4.7 Information for the specialist

Further advice for the medical sector: <http://buttonbatterysafety.com/>

See also Chapter 7.

### 4.8 Further information

Most important symptoms and effects, both acute and delayed: ---

Indication of any immediate medical attention and special treatment needed: ---

## 5. Fire fighting measures

### 5.1 Suitable extinguishing media

Use foam, water, or CO<sub>2</sub>, as appropriate.

### 5.2 Extinguishing media which must not be used for safety reasons

(none)

### 5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

(none)

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

#### 5.4 Special protective equipment for fire fighting

Contamination cloth including breathing apparatus.

#### 5.5 Further information

---

### 6. Accidental release measures

#### 6.1 Personal precautions

Wear personal protective equipment adapted to the situation (protection gloves, cloth).

#### 6.2 Environmental precautions

In the event of battery rupture, prevent skin contact and collect all released material in a plastic lined container.

Dispose of according to the local law and rules.

Avoid leached substances to get into the earth, canalization or waters.

#### 6.3 Methods for cleaning up

If battery casing is dismantled, small amounts of electrolyte may leak. Pack the battery including ingredients as described above. Then clean with water (diluted acetic acid may be helpful).

#### 6.4 Further information

---

### 7. Handling and Storage

#### 7.1 Precautions for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types.

Keep batteries away from children.

For devices to be used by children, the battery casing should be protected against unauthorized access.

Unpacked batteries shall not lie about in bulk.

In case of battery change always replace all batteries by new ones of identical type and brand.

Do not swallow batteries.

Do not throw batteries into water.

Do not throw batteries into fire.

Do not short-circuit batteries.

Do not recharge primary batteries.

Do not open or disassemble batteries.

Further advice for parents: <http://buttonbatterysafety.com/>

#### 7.2 Precautions against fire and explosion

---

#### 7.3 Further information

##### **Supply to private end users:**

In case the products are supplied to private end users packed with equipment or contained in equipment it is strongly recommended to follow UL product and instruction manual requirements:

The product is required to be marked with a graphical symbol that alerts the user to refer to the instruction manual.

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

The instruction manual itself is required to contain

- a warning marking with text to alert the user of the potential chemical burn hazard associated with coin/button battery ingestion,
- an instruction as to the presence of a coin/button cell battery,
- possible effects of battery ingestion,
- an instruction to keep batteries away from children,
- an advice to seek immediate medical attention if it suspected that batteries have either been swallowed or placed inside any part of the body.

#### 7.4 Conditions for storage rooms and vessels

##### **Storage:**

Storage preferably at room temperature (approx. 20°C). Avoid large temperature changes. Avoid direct sunlight. At higher temperature the electrical performance may be reduced.

Storage of unpacked batteries can cause short circuit and heat generation.

##### **Storage of large amounts:**

If possible, store the batteries in original packaging (short circuit protection); A fire alarm is recommended; For automatic fire extinction consider chapter 5 "Fire fighting measures".

##### **Storage category according to TRGS 510:**

It is recommended to consider the "Technical Rule for Hazardous Substances TRGS 510 - Storage of hazardous substances in nonstationary containers" and to handle primary zinc/air button cells according to storage category 11 ("combustible solids").

#### 7.5 Advice for storage of incompatible materials

---

#### 7.6 Specific end use(s)

---

#### 7.7 Further information

---

### 8. Exposure controls and personal protection

Limit values for the exposition at the place of work and/or biological limit values:

#### 8.1 Occupational exposure limits (OELs) in Germany

---

#### 8.2 Indicative occupational exposure limit values of the European Union

---

#### 8.3 Limitation and control of the exposition

Under normal conditions (discharge, avoid prolonged deep discharge) release of ingredients does not occur.

#### 8.4 Personal protection equipment

##### 8.4.1 Respiratory protection

---

##### 8.4.2 Hand protection

---

##### 8.4.3 Eye protection

---

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

#### 8.4.4 Body protection

---

#### 8.5 General protection and hygiene measures

---

#### 8.6 Limitation and control of the environmental exposition

---

#### 8.7 Further information

Under normal conditions (discharge, avoid prolonged deep discharge) release of ingredients does not occur.

### 9. Physical and chemical properties

Not applicable if closed.

#### 9.1 Appearance

Form: ---

Color: ---

Odor: ---

#### 9.2 Important safety information

Test method

**Not applicable if closed.**

pH-value: ---  
 Change of state: ---  
 Boiling point: ---  
 Decomposition temperature: ---  
 Flash point: ---  
 Autoflammability: ---  
 Flammability limits: ---  
 Vapor pressure: ---  
 Viscosity: ---  
 Density: ---  
 Relative density: ---  
 Evaporation rate: ---  
 VOC g/l: ---

#### 9.3 Further information

Thermal decomposition: ---  
 Solubility in water: ---  
 Distribution coefficient  
 octanol/water: ---  
 Solvent separation test: ---  
 Solvent content: ---

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016



## 10. Stability and reactivity

### 10.1 Conditions to avoid

---

### 10.2 Materials to avoid

---

### 10.3 Hazardous decomposition products

---

### 10.4 Further information

Reactivity:

Chemical stability:

Possibility of hazardous reactions: When heated above 60°C the risk of rupture occurs.

Incompatible materials: ---

## 11. Toxicological information

### 11.1 General information

Under normal conditions (during charge and discharge) release of ingredients does not occur. If accidental release occurs see information in section 2, 3, and 4.

Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

### 11.2 Toxicological tests

---

### 11.3 Practical experience

---

### 11.4 Information on the ingredients

---

## 12. Ecological information

### 12.1 Ecological toxicity

---

### 12.2 Mobility in soil

---

### 12.3.Persistence and degradability

---

### 12.4 Potential of biological accumulation

---

### 12.5 Test result of PBT characteristics

---

### 12.6 Other harmful effects

---



**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

## 12.7 Ecological information

Primary zinc/air button cells manufactured by VARTA Microbattery do contain lead, and do not contain mercury and cadmium as defined by the European directive 2006/66/EC Article 21.

Mercury has not been "intentionally introduced (as distinguished from mercury that may be incidentally present in other materials)" in the sense of the U.S.A. "Mercury-Containing and Rechargeable Battery Management Act" (May 13 1996).

The Regulation on Mercury Content Limitation for Batteries promulgated on 1997-12-31 by the China authorities including the State Administration of Light Industry and the State Environmental Protection Administration defines 'low mercury' as 'mercury content by weight in battery as less than 0.025%', and 'mercury free' as 'mercury content by weight in battery as less than 0.0001%'. And therefore: primary zinc/air button cells manufactured by VARTA belong to the category of low-mercury battery (mercury content lower than 0.025%).

## 13. Disposal considerations

### 13.1 Material

---

### 13.2 Recommendation

---

### 13.3 European Waste Catalog Ref.No.

---

### 13.4 Contaminated packaging

---

### 13.5 Non-contaminated packaging

---

### 13.6 Further information

**USA:** Primary zinc/air button cells are classified by the federal government as non-hazardous waste and are safe for disposal in the normal municipal waste stream.

**In the European Union,** manufacturing, handling and disposal of batteries is regulated on the basis of the DIRECTIVE 2006/66/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC. Customers find detailed information on disposal in their specific countries using the web site of the European Portable Batteries Association ([http://www.epbaeurope.net/legislation\\_national.html](http://www.epbaeurope.net/legislation_national.html)).

Importers and users outside EU should consider the local law and rules.

In order to avoid short circuit and heating, used zinc/air button cells should never be stored or transported in bulk. Proper measures against short circuit are:

- Storage of batteries in original packaging
- Coverage of the terminals

## 14. Transport information

### General considerations

Primary zinc/air button cells manufactured by VARTA Microbattery are considered to be "dry cell" batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civic Aviation Administration (ICAO), International Air Transport Association (IATA), the International Maritime Organization (IMO), the "Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route" (ADR) and the "Règlement concernant le transport international ferroviaire de marchandises Dangereuses" (RID).



**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

## 14.1 Land transportation (ADR/RID/GGVS/GGVE)

### ADR/RID Code

As primary zinc/air button cells are not explicitly mentioned in these Dangerous Goods regulations, there are no special Dangerous Goods shipment requirements for these products.

ADR/RID-GGVS/E-class ---

Cl.-code: ---

UN-No.: ---

PG: ---

Hazard label: ---

Substance No.: ---

UN Proper shipping name: ---

Transportation emergency card number: ---

Warning board – Hazard No.: ---

Further information: ---

Limited quantities: ---

LQ Land: ---

## 14.2 Inland navigation (ADN/ADNR)

ADN/ADNR-class ---

Number/letter: ---

Category: ---

Further information: ---

## 14.3 Transportation by sea (IMDG/GGV Sea)

### IMDG Code

As primary zinc/air button cells are not explicitly mentioned in these Dangerous Goods regulations, there are no special Dangerous Goods shipment requirements for these products.

IMDG/GGV Sea-class: ---

Hazard label: ---

UN-No.: ---

PG: ---

EmS: ---

Marine pollutant: ---

Special provisions: ---

UN proper shipping name: ---

Technical name: ---

LTD. QTY: ---

LQ Sea: ---

## 14.4 Air transportation (ICAO-TI/IATA-DGR)

### IATA DGR

Special Provision A123: *“Examples of such batteries are: alkali-manganese, zinc-carbon,, nickel-metal hydride and nickel-cadmium batteries. Any electrical battery ... having the potential of a dangerous evolution of heat must be prepared for transport as to prevent (a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals...) is forbidden from transport; and (b) accidental activation. The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.”*

ICAO/IATA-class: ---

UN/ID-No.: ---

PG: ---

Hazard label: ---

UN proper shipping name: ---

Technical name: ---

Further information: ---

Air mail transportation: ---

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

## 14.5 Further information

### USA

49 CFR § 172.102 Special Provision 130: "Dry batteries not specifically covered by another entry in the §172.101 Table are covered by this entry ( i.e., Batteries, dry, sealed, n.o.s.) and are not subject to requirements of this subchapter except for the following: [...] (b) Preparation for transport. Batteries and battery-powered device(s) containing batteries must be prepared and packaged for transport in a manner to prevent: (1) A dangerous evolution of heat; (2) Short circuits, including but not limited to the following methods: [...] (ii) Separating or packaging batteries in a manner to prevent contact with other batteries, devices or conductive materials (e.g., metal) in the packagings [...]; and (3) Damage to terminals. If not impact resistant, the outer packaging should not be used as the sole means of protecting the battery terminals from damage or short circuiting. Batteries must be securely cushioned and packed to prevent shifting which could loosen terminal caps or reorient the terminals to produce short circuits."

### IEC 60086-1

Code of practice for packaging and shipment of primary batteries given in IEC 60086-1:

*The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.*

*Shock and vibration shall be kept to a minimum. For instance, boxes should not be thrown off trucks, slammed into position or piled so high as to overload battery containers below. Protection from inclement weather should be provided.*

## 15. Regulatory information

### National regulations (Germany)

#### 15.1 Occupational restrictions:

---

#### 15.2 Classification according to VbF

---

#### 15.3 Classification of possible adverse effects in the aquatic environment (WGK)

---

#### 15.4 Chemical safety assessment

---

#### 15.5 Further information

##### Marking consideration:

Primary zinc/air button cells manufactured by VARTA Microbattery conform to the requirements of the Medical Devices Directive 93/42/EEC class I and are thus marked with the CE symbol.

According to DIRECTIVE 2006/66/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC all batteries have to be marked with the crossed bin; according to Article 21 of this directive primary zinc/air button cells have to be marked with the element symbols "Hg" and "Pb".

##### International safety standards:

IEC 60086-5: "... system P button cells or batteries under 700 mAh capacity are exempt from any testing".

##### Water hazard class:

The regulations of the German Federal Water Management Act (WHG) are not applicable as primary zinc/air button cells are articles and not substances, thus there is no risk of water pollution, except the batteries are violated or dismantled.

**Product name: cedis premium hearing aid batteries**

**REF: 78200, 78220,  
78240, 78260**

Date of print: 2016-01-22

Date of last alteration: 22 January 2016

## EU regulations

### 15.6 Further information

---

## 16. Other information

### 16.1 Wording of the R-phrases under section 3:

R-phrases:

---

H-statements:

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H332 Harmful if inhaled

H360D May damage fertility or the unborn child

H373 May cause damage to organs through prolonged or repeated exposure

H410 Very toxic to aquatic life with long lasting effects

P-statements:

---

### 16.2 Explanation of the abbreviations:

n. a. = not applicable                      n. s. = not subject to

VbF = Verordnung über brennbare Flüssigkeiten (= Guidelines on flammable liquids)

WGK = Wassergefährungsklasse (= Water Hazard Classification)

---

### 16.3 Literature register

Note:

Date of issue of the transport regulations: ADR 2015, RID 2015, IATA 2015 (56th edition), IMDG 2014, DOT/49 CFR 2015. Latest covered modification of the European Battery Directive 2006/66/EC: Directive 2013/56/EU.

The given information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations.

The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.