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

1.1. Product identifier

Lithium-ion battery in Equipment

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

Use of the substance/preparation

Battery / Accumulator

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Albert Kerbl GmbH
Felizenzell 9
84428 Buchbach

Telephone no.	+49 8086 933-100
Fax no.	+49 8086 933-500
Information provided by / telephone	Albert Kerbl GmbH Tel.: 0049-(0)8086-933-302
E-mail address of person responsible for this SDS	sdb-team@kerbl.com

1.4. Emergency telephone number

Joint poison information center for the states of Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia c/o HELIOS Klinikum Erfurt Nordhäuser Strasse 74

Tel.: (03 61) 73 07 30 - Fax: (03 61) 7 30 73 17
E-Mail: ggiz@ggiz-erfurt.de - Internet: www.ggiz-erfurt.de

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Supplemental information
This is a article.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

The product is an article within the meaning of Article 3 No. 3 of the REACH Regulation and thus not to be labelled according to the CLP regulation. The compilation of the Safety Data sheet is not required according to Article 31 REACH Regulation for articles and is done on a voluntary basis.

2.3. Other hazards

Lithium-ion cells are sealed units that are not hazardous when used properly. There is only a risk of exposure if the battery is handled incorrectly mechanically or electrically. Eye and skin contact with the electrolyte solution should be avoided. A short-circuited lithium battery can cause thermal and chemical burns on contact with the skin.

SECTION 3: Composition/information on ingredients

Other information

The product is an article within the meaning of Article 3 No. 3 of the REACH Regulation and thus not to

be labelled according to the CLP regulation. The compilation of the Safety Data sheet is not required according to Article 31 REACH Regulation for articles and is done on a voluntary basis.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the event of leaks and leaking electrolyte, the measures listed below must be carried out.

After inhalation

Ensure supply of fresh air. In the event of symptoms take medical treatment.

After skin contact

After contact with skin, wash immediately with plenty of water. Take off contaminated clothing immediately. Consult a doctor if skin irritation persists.

After eye contact

Remove contact lenses. Separate eyelids, wash the eyes thoroughly with water (15 min.). In case of irritation consult an oculist.

After ingestion

Rinse out mouth and give plenty of water to drink. Summon a doctor immediately.

Adhere to personal protective measures when giving first aid

First aider: Pay attention to self-protection!

4.2. Most important symptoms and effects, both acute and delayed

On contact with the electrolyte liquid: May cause respiratory irritation. Causes eye irritation. Causes skin irritation. Irritation of the mouth and throat. May produce an allergic reaction.

4.3. Indication of any immediate medical attention and special treatment needed

Hints for the physician / treatment

Treat symptomatically

Hints for the physician / hazards

No further relevant information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Dry chemical extinguisher, Metal fire extinguisher, Used from safe distance.

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of combustion evolution of dangerous gases possible. In the event of fire the following can be released: dense black smoke; Exposure to decomposition products may be hazardous to health. Do not breathe fumes.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

In case of combustion use a suitable breathing apparatus.

Other information

Cool endangered containers with water spray jet. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Keep away sources of ignition. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Pick up mechanically. Clean contaminated floors and objects thoroughly, observing environmental regulations. If the battery housing gets damaged, electrolyte can leak out. Seal batteries in an airtight plasticbag, having added dry sand, chalk powder (CaCO3) or vermiculite. Traces of electrolyte can be soaked up with dry paper towels. When doing so, prevent direct contact with skin by wearing safety gloves (EN 374). Thoroughly rinse with water.

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Follow the instructions of use. Keep away from heat, naked flames and hot surfaces. - Do not smoke! Protect from heat and direct sunlight. Effectively prevent short-circuiting of the battery terminals through suitable insulation. Do not use unauthorised chargers or charging methods. Do not open, dismantle or drop from a great height. Do not puncture or crush. Incorrect handling can lead to an explosion or start a fire. . Risk of heat, fire, explosion: - Do not dip the battery / rechargeable battery into water or get it wet. - Do not use the battery near fire or heaters and do not leave it there. - Do not connect the battery upside down to the positive (+) and negative (-) poles of the charger or equipment. - Do not connect the battery directly to a power socket or a cigarette lighter socket in a car.

Advice on protection against fire and explosion

No special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in original packaging, tightly closed.

Hints on storage assembly

Do not store together with foodstuffs.

Further information on storage conditions

Protect from heat and direct sunlight. Store in a dry place. Keep in a cool place. Do not store the product in passageways and stairways.

7.3. Specific end use(s)

Battery / Accumulator

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other information

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

General protective and hygiene measures
Remove and wash contaminated clothing before reuse. Wash hands before breaks and after work. Keep away from foodstuffs and beverages.

Respiratory protection
Normally not required.

Hand protection
Normally not required.
The selection of a suitable glove depends not only on the material but also on other quality features and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.
Hand protection must comply with EN 374.

Eye protection
Normally not required.

Body protection
Normally not required.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state solid

Melting point
Remarks not determined

Freezing point
Remarks not determined

Boiling point or initial boiling point and boiling range
Remarks not determined

Flammability
not determined

Upper and lower explosive limits
Remarks not determined

Flash point
Value > 60 °C
Remarks not determined

Auto-ignition temperature
Remarks not determined

Decomposition temperature
Remarks not determined

pH value
Remarks not determined

Viscosity
Remarks not determined

Solubility(ies)
Remarks not determined

Partition coefficient n-octanol/water (log value)

Remarks not determined

Vapour pressure

Remarks not determined

Density and/or relative density

Remarks not determined

Relative vapour density

Remarks not determined

9.2. Other information

Odour threshold

Remarks not determined

Evaporation rate (ether = 1) :

Remarks not determined

Solubility in water

Remarks not determined

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

Other information

None known

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

10.4. Conditions to avoid

Protect from heat and direct sunlight. Protect against wetness. Water. acid. Oxidising agents. Metals. Conductive materials

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Remarks Based on available data, the classification criteria are not met.

Acute dermal toxicity

Remarks Based on available data, the classification criteria are not met.

Acute inhalational toxicity

Remarks Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Remarks Based on available data, the classification criteria are not met.

Serious eye damage/irritation
Remarks Based on available data, the classification criteria are not met.

Sensitization
Remarks Based on available data, the classification criteria are not met.

Subacute, subchronic, chronic toxicity
Remarks Based on available data, the classification criteria are not met.

Mutagenicity
Remarks Based on available data, the classification criteria are not met.

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

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

Specific Target Organ Toxicity (STOT)
Remarks Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Endocrine disrupting properties with respect to humans
No data available.

Other information
There is no data available on the product apart from the information given in this subsection.

SECTION 12: Ecological information

12.1. Toxicity

General information
not determined

12.2. Persistence and degradability

General information
not determined

12.3. Bioaccumulative potential

General information
not determined

Partition coefficient n-octanol/water (log value)
Remarks not determined

12.4. Mobility in soil

General information
not determined

12.5. Results of PBT and vPvB assessment

General information
not determined

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment
No data available.

12.7. Other adverse effects

General information
not determined

General information / ecology
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product
Lithium batteries are labelled with the crossed-out wheeled bin symbol.
Do not dispose of it with household waste.
Dispose of waste according to applicable legislation.

Disposal recommendations for packaging
Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number or ID number	3481	3481	3481
14.2. UN proper shipping name	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
14.3. Transport hazard class(es)	9	9	9
Label			
Limited Quantity	0	0	
Transport category	2		
Tunnel restriction code	E		

Information for all modes of transport

14.6. Special precautions for user
none

Other information

14.7. Maritime transport in bulk according to IMO instruments
Not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations, restrictions and prohibition regulations

EU regulations:
Regulation (EU) 2023/1542 on batteries and waste batteries

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.
Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.
The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.
It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.
The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

LITHIUM CELLS OR BATTERIES TEST SUMMARY
IN ACCORDANCE WITH SUB-SECTION 38.3 OF MANUAL OF TESTS AND CRITERIA

BATTERY TRANSPORTATION INFORMATION

for Albert Kerbl GmbH, Battery Clippers DeloX, article no. 18463

Name of cells, battery or product manufacturer, as applicable:

Item Number: ICR18650 / LIR18650

Item Name: Cylindrical Li-Ion Battery ICR18650 2200mAh 3,7V

Item Description: 3V Lithium Ion Battery (including single cell batteries)

Cell, battery or product manufacturer's contact information to include address, phone number, email address and website for more information:

Albert Kerbl GmbH
Felizenzell 9
84428 Buchbach (Germany)
Phone: +49 8086 933-100
Email: info@kerbl.de
Website: www.kerbl.de

Name of the test laboratory to include address, phone number, email address and website for more information:

Vkan Certification & Testing Co. Ltd.
No. 3, Tiantaiyi Road, Kaitai Avenue,
Science City,
Guangzhou, China
Phone: 020 32293888
Email: office@cvc.org.cn
Website: www.cvc.org.cn

A unique test report identification number:

RZUN2015-0708

Date of the latest report:

16-Mrz-2015

List of tests conducted and results (i.e., pass/fail):

Test T.1: Altitude Simulation : *Pass*

Test T.2: Thermal Test : *Pass*

Test T.3: Vibration : *Pass*

Test T.4: Shock : *Pass*

Test T.5 External short circuit : *Pass*

Test T.6: Impact/Crush : *Pass / Not applicable*

Test T.7: Overcharge : *Not applicable*

Test T.8: Forced discharge : *Pass*

Testing additional comments:

Description of cell or battery to include at a minimum: Lithium ion or Lithium metal cell or battery; Mass; Watt-hour rating, or lithium content; Physical description of the cell/battery; and Model numbers:

Battery used in consumer power tools.

Cell/battery Type : Cylindrical Li-Ion Battery

Cell or Battery : Battery

LC or W/h rating : 8,14 W/h

Cell or Battery Weight : 50 g

Reference to assembled battery testing requirements, if applicable (i.e., 38.3.3;(f) and 38.3.3;(g)):

Not applicable

Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto, if any:

Revision 5

For air transport only:
Does the cell or battery comply with the 30% State of Charge?

<30%

PRODUKT CLASSIFICATION FOR TRANSPORT (According to UN – DGP)

UN Classification:

UN3481
Sea: SP 188
Air: PI967, Section II

Proper Shipping Name:

Lithium Ion Battery contained in equipment

Signature with name and title of signatory as an indication of the validity of information provided:

Testing Manager Sony Zhiang

Date document was generated:

09-Jan-2020

This document remains valid as long as no changes, modifications, or additions are made to the model(s) described in this document, after being transported from a Manufactured XYZ facility.
The model(s) has (have) been classified according to the applicable transport regulations and the UN Manual of Tests and Criteria as of the date of the certification. The model(s) must be packaged, labeled, and documented according to country and other international regulations for transportation.