

Material Safety Date Sheet

MSDS

Lithium-ion Battery

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product name : Lithium-ion Battery
Model Name: Ex18650B1
Norminal Voltage: 3.6V
Norminal Capacity: 3250mAh
Equipment Lithim Content: 11.7Wh
Testing period: Jan,02,2021
MSDS Number: LL202101020002
Company: Ledlenser Corporation Ltd
Address: No.25 YuDong1 RD. Dongcheng Town.Yangjang.GD. China
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SECTION 2 HAZARDS IDENTIFICATION

The battery has passed the test items of UN model Regulations,Manual of Test and Criteria Section UN 38.3.

Emergency overview:

Caution:Avoid contact and inhalation the electrolyte contained inside the battery

SECTION 3 INFORMATION ON INGREDIENTS

Product name:	Concentration(%)	CAS Number
Lithium-ion Battery		
Common Chemical Name		
Lithium Metal oxiate	20-60	7439-93-2
Aluminium	1-10	7429-90-5
carbon	10-30	7440-44-0
copper	1-15	7440-50-8
organic electrolyte pronicpacally involves	5-25	96-49-1
Aluminum,Iron.aluminum labmunater plastic	1-30	7439-89-6 7429-90-5

SECTION 4 FIRST-AID MEASURE

Skin Exposure:If the internal battery materials of an opened cell come into contact with the skin,immediately flush with plenty of water.

Eye Exposure:In case of the internal battery materials in contact with eyes,flush with copious ammounts of water for at least 15 minuters.Assure adequate flushing by separating the eyelids with fingers.Call a physician.

Inhalation Exposure: If inhaled the internal materials of battery ,remove immediately to fressh air and seek medical attention

Oral Exposure:If swallowed the internal materials of battery, do not induce vomiting,seek immediate medical attetion.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing media

Suitable:Dry chemical, Sandy soil , Carbon dioxide or appropriate foam.

Firfighting:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards:Emit toxic fumes under fire conditions.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Procedure of personal precaution:

If batteries show signs of leaking,avoid skin or eye contact with the material leaking from the battery
Use chemical resistant rubber gloves and non-flammable absorbent materials for clean up.Mix with inert material (e.g dry sand,vermiculite) and transfer to sealed container for disposal.

SECTION 7 HANDLING AND STORAGE

Handling:

Keep away from ignition sources, heat and flame. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Avoid mechanical or electrical abuse. More than a momentary short circuit will generally reduce the battery service life. Avoid reversing battery polarity within the battery assembly. In case of a battery unintentionally be crushed, rubber gloves must be used to handle all battery components. Avoid contact with eyes, skin. Avoid inhalation. No smoking at working site. Materials to avoid: Strong oxidizing agents, corrosives.

SECTION 8 EXPOSURE CONTROL /PPE

Engineering Control: Use ventilation equipment if available. Safety shower and eye bath.

Personal Protective Equipment:

Respiratory system : Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Hand: Safety gloves.

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

Appearance: Red pvc enclosure
Odor : Odorless
Melting Point/C° : >300C°
Solubility : Partial soluble in water

SECTION 10 STABILITY AND REACTIVITY

Stability : Stable under normal temperatures and pressures.

Conditionals to avoid:

Avoid exposure to heat and open flame. Avoid mechanical or electrical abuse. Prevent short circuits. Prevent movement which could lead to short circuits.

Materials to avoid: **Strong oxidizing agents Corrosives.**

Hazardous Polymerization: Will not occur

Hazardous Decomposition Products: Metal oxides, Co, CO₂

SECTION 11 TOXICOLOGICAL INFORMATION

Toxicity data: Not available

Irritation data: : The internal battery materials may cause irritation to eyes and skin.

SECTION 12 ECOLOGICAL INFORMATION

NO data available

SECTION 13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:

Lithium batteries are best disposed of as a non hazardous waste when fully or mostly discharged.

Contact a licensed professional waste disposal service to dispose of large quantities materials.

SECTION 14 TRANSPORT INFORMATION

This battery sample is Lithium ion/polymer battery, the battery is proved to meet the required tests in the UN manual of tests and criteria ,Part III Subsection 38.3.

Can be transported by air condition according to the packing instruction 965-966 and 967 of 2021 IATA Dangerous Goods regulations 61th Edition.

Can be transported by Sea condition according to the special provision 188 of IMO IMDG 2021 version relevant regulations.

SECTION 15 REGULATORY INFORMATION

ICAO:

1. Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN 3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless be approved according to ICAO TI, Lithium ion cells / batteries (UN 3480, PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.
3. A shipper is not permitted to offer for transport more than one (1) package prepared according to Section II of PI 965 and PI 968 may be placed into an overpack.
4. Packages prepared according to Section II of PI 965 and PI 968 must be offered to the operator separately from other cargo and must not be loaded into a unit load device (ULD) before being offered to the operator.