1. Chemical Product and Company Identification

Chemical product identification

Product name:	Rechargeable Lithium ion Battery
Manufacturer:	Master Battery, S.L.
Address:	Área Industrial La Dehesa - Calle Dehesa Vieja, 2 - 28052 Madrid (Spain).
Tel:	(+34) 918 021 649
Fax:	(+34) 917 750 542

2. Hazards Identification

Not dangerous with normal use. Do not dismantle, open or shred battery. Exposure to the ingredients contained within or their ingredients products could be harmful.

Primary routes of exposure

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically, thermally or electrically abused. If this occurs, exposure to the electrolyte solution contained within can occur by Inhalation, Ingestion, eye contact and skin contact.

Potential Health Effects

Inhalation: Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.

Swallow: Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus and gastrointestinal tract.

Skin: Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.

Eye: Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.

Other hazards: No information available.

MASTER BATTERY

Área Industrial La Dehesa
Calle Dehesa Vieja, 2
28052 Madrid (España)
Tel. (+34) 918 021 649
Fax. (+34) 917 750 542
info@masterbattery.es



3. Composition, Information on Ingredients

Rechargeable Lithium ion Battery is a mixture

Chemical Name	Composition (in % by weight)	CAS Number
Aluminum (Al)	15-19	7429-90-5
Copper (Cu)	16-20	7440-50-8
$LiFePO_4$	28-32	15365-14-7
Graphite (C)	13-17	7782-42-5
Lithium	1.6-2.0	21324-40-3
Organic Solvents	15-18	N/A

4. First Aid Measures

Description of first aid measures

General information

No special measures required.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing

Do not induce vomiting. Get medical attention.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After eye contact

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

MASTER BATTERY

Área Industrial La Dehesa
Calle Dehesa Vieja, 2
28052 Madrid (España)
Tel. (+34) 918 021 649
Fax. (+34) 917 750 542
info@masterbattery.es

5. Fire Fighting Measures

Flash Point: N/A.

Suitable extinguishing agents

Use extinguishing agent suitable for local conditions and the surrounding environment. Such as dry powder, CO_2.

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation.

Advice for firefighters

Protective equipment: Wear self-contained breathing apparatus. Wear fully protective impervious suit.

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, place the spilled material into a suitable disposal container. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Avoid skin and eye contact or inhalation of vapors.

Waste Disposal Method

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state and federal requirements. Consult state environmental protection agency and / or federal EPA.

7. Handling and Storage

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other Precautions

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

MASTER BATTERY

Área Industrial La Dehesa
Calle Dehesa Vieja, 2
28052 Madrid (España)
Tel. (+34) 918 021 649
Fax. (+34) 917 750 542
info@masterbattery.es



8. Exposure Controls and Personal Protection

Engineering Controls

Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keep away from heat and open flame. Store in a cool, dry place.

Personal Protective Equipment

Respiratory Protection: Not necessary under normal conditions.

Skin and body Protection: Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery.

Hand protection: Wear neoprene or natural rubber material gloves if handling an open or leaking battery.

Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.

Other Protective Equipment

Have a safety shower and eye wash fountain readily available in the immediate work area.

Hygiene Measures

Do not eat, drink, or smoke in work area. Maintain good housekeeping.

9. Physical and Chemical Properties

Nominal Voltage:	12.8 V.
Rated Capacity:	150 Ah.
Appearance Characters:	Quadrate, odorless, solid battery

10. Stability and Reactivity

Chemical stability: The product is stable under normal conditions.

Conditions to Avoid

Flames, sparks, and other sources of ignition, incompatible materials.

Incompatibilities

Oxidizing agents, acid, base.

Hazardous Combustible Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

Possibility of hazardous reactions: Data not available.

MASTER BATTERY

Área Industrial La Dehesa
Calle Dehesa Vieja, 2
28052 Madrid (España)
Tel. (+34) 918 021 649
Fax. (+34) 917 750 542
info@masterbattery.es



11. Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened.

Exposure to internal contents, the corrosive fumes will be very irritation to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

12. Ecological Information

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

13. Disposal Considerations

If batteries are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of uncreated, or unconsumed lithium remaining in the spent battery. The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste. Recycling of battery can be done in authorized facility, through licensed waste carrier.

14. Transport Information

Batteries containing these cells should be transported as Class 9 hazardous material. UN-Number: 3480.

According to the Packing Instruction 965 section IA of IATA DGR 61th Edition for transportation, the Packing Instruction 903 of IMDG CODE (Amdt. 38-16) 2016 Edition.

Separate Lithium-ion batteries when shipping to prevent short-circuiting.

They should be packed in strong packaging for support during transport.

Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain.

Transport Fashion: By air, by sea, by railway, by road.

MASTER BATTERY

Área Industrial La Dehesa
Calle Dehesa Vieja, 2
28052 Madrid (España)
Tel. (+34) 918 021 649
Fax. (+34) 917 750 542
info@masterbattery.es



15. Regulatory Information

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

Composition	CAS#	IECSC	DSL	TSCA	EC#	EINECS
$LiPF_6$	21324-40-3	Listed	Listed	Listed	244-334-7	Listed
Graphite	7782-42-5	Listed	Listed	Listed	231-955-3	Listed
Aluminum	7429-90-5	Listed	Listed	Listed	231-072-3	Listed
Copper	7440-50-8	Listed	Listed	Listed	231-159-6	Listed

16. Additional Information

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

MASTER BATTERY

Área Industrial La Dehesa
Calle Dehesa Vieja, 2
28052 Madrid (España)
Tel. (+34) 918 021 649
Fax. (+34) 917 750 542
info@masterbattery.es