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MSDS Report

Samples:IFR18650 MJB3245 LiFePO4 3.2V 4500mAh 14.4Wh

MATERIAL SAFETY DATA SHEET

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1. PRODUCT & COMPANY IDENTIFICATION

1.1 PRODUCT IDENTIFICATION

PRODUCT NAME: Lithium-ion battery

MODEL NUMBER: IFR18650 MJB3245 LiFePO4 3.2V 4500mAh 14.4Wh

2. HAZARDS IDENTIFICATION

2.1 PRIMARY ROUTES OF ENTRY

Skin contact/absorption, Eye contact, Inhalation and Ingestion: NO

2.2 SYMPTOMS OF EXPOSURE (No effect under routine handling and use)

Skin contact/absorption

Eye contact

Inhalation and Ingestion

3. COMPOSITION INFORMATION

COMPONENTS	CAS No.	Formula	WEIGHT (%)	EC No.
LiNiCoMnO ₂		LiNiCoMnO ₂	25-30	/
Carbon, as Graphite	7440-44-0	C	12-15	231-153-3
Copper metal	7440-50-8	Cu	8-10	231-159-6
Graphite	7782-42-5	C	2-4	231-955-3
Polyvinylidene fluoride(PVDF)	24937-79-9	(C ₂ H ₂ F ₂) _n	2-3	/
Aluminum metal	7429-90-5	Al	5-6	231-072-3
Ethylene carbonate	96-49-1	C ₃ H ₄ O ₃	4-5	202-510-0
Dimethyl carbonate	616-38-6	C ₃ H ₆ O ₃	2-5	210-478-4
Nickel	7440-02-0	Ni	1-2	231-111-4
Lithium	7439-93-2	Li	2-3	231-102-5

4.EMERGENCY RELEASE INFORMATION

If exposure to the internal materials from a damaged or ruptured cell, the following actions are recommended:

Skin contact: Washing with water & soap thoroughly, or seek medical attention immediately.

Eye contact: Rinsing eyes with water for 15 minutes, and seek medical attention immediately.

Inhalation : Leave to fresh air immediately and seek medical attention.

Ingestion : Seek medical attention immediately.

5. FIRE FIGHTING INFORMATION

Cell is not flammable but the internal organic material will burn if the cell is incinerated, if cells or battery are involved in a fire or exposed to excessive heat. Cells or battery may flame or leak potentially hazardous organic vapors.

Extinguishing Media: Dry chemicals.

Fire-Fighting Instructions: Use self-contained breathing apparatus and protective clothing to extinguish, and remove cells from the fire fighting area if possible, or call local fire/police department.

6. Accidental Release Measures

Personal Precautions, protective equipment, and emergency procedures	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section8.
Environmental Precautions	Prevent material from contaminating soil and from entering sewers or waterways.
Methods and materials for Containment	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.

Methods and materials for cleaning up	Absorb spilled material with an inert absorbent(dry Sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.
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7. HANDLING & STORAGE

7.1 Keep the cell in a cool & dry environment, do not immerse the cell in water or seawater, do not use or leave the cell near a heat source such as fire or heater.

7.2 Do not make terminal to short circuit by directly connecting the positive (+) and negative (-) with metal objects such as wire, or reverse the position (+) and negative (-) terminals. Because it may cause the battery/cell to flame or emit gases.

7.3 Battery/cell charging & recharging should following the recommendation described as below:

To ensure safety, the cells need to be assembled with PTC and protective circuitry to prevent abusive situations occur such as over charge and over discharge or over current. The charger and protective circuitry should be consistent with the requirements listed below:

No	Device	Items	Requirements
1	Charger	Charge termination voltage	12.60V±0.05V
2	Protective Circuitry (For reference only)	Overcharge detection voltage	4.25±0.025V
3		Discharge termination voltage	2.80±0.05V
4		Over discharge detection voltage	3.00±0.05V
5		Discharge current protection	≤3.0A
6		Operation Static Current	≤50uA

7.4 Do not disassemble or puncture or crush or incinerate the battery/cell.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

8.1 EXPOSURE CONTROL:

Storing in a dry place and keeping away from a heat source such as fire or heater.

8.2 PERSONAL PROTECTION:

EYE/FACE PROTECTION: Not required during the normal operation.

INHALATION PROTECTION: Not required during the normal operation.

SKIN & BODY PROTECTION: Not required during the normal operation.

9. PHYSICAL & CHEMICAL PROPERTIES

N/A

10. STABILITY & REACTIVITY

10.1 REACTIVITY: NONE.

10.2 STABILITY: The cell/battery is stable during normal operation. Avoid exposure to heat or open flame, don't puncture, crush or incinerate.

11. TOXICOLOGICAL INFORMATION

The materials contained in cell/battery are described in paragraph 2., it does not elicit any toxicological properties during routine handling and use.

12. ECOLOGICAL INFORMATION

The materials contained in cell/battery are described in paragraph 2., this materials have no risk to persons or the surrounding environment under normal conditions.

13. DISPOSAL RECOMMENDATION

Dispose of the battery/cell according to local regulation.

14. TRANSPORTATION & USE

Label for conveyance: Lithium Battery Label, Class 9 Label, Cargo Aircraft Only

UN number: UN3480

Packaging Group: N/A

Marine pollutant: NO

Proper Shipping name: Lithium Batteries

Hazard Classification: The goods shall be complied with the requirements of Packing Instruction 965~967 of 64th-2023 DGR Manual of IATA, and Package complies with the special provision 188 of IMDG CODE (Amdt.40-20) 2022 Edition, including the UN38.3 test.

15. Regulatory Information

Law information

«Dangerous Goods Regulations»

«Recommendations on the Transport of Dangerous Goods Model Regulations»

«International Maritime Dangerous Goods»

«Technical Instructions for the Safe Transport of Dangerous Goods»

«Classification and code of dangerous goods»

«Occupational Safety and Health Act» (OSHA)

«Toxic Substance Control Act» (TSCA)

«Consumer Product Safety Act» (CPSA)

«Federal Environmental Pollution Control Act» (FEPCA)

«The Oil Pollution Act» (OPA)

«Superfund Amendments and Reauthorization Act TitleIII (302/311/312/313) » (SARA)

«Resource Conservation and Recovery Act» (RCRA)

«Safety Drinking Water Act»(CWA)

«California Proposition 65»

«Code of Federal Regulations»(CFR)

In accordance with all Federal, State and local laws

16. Additional Information

MSDS creation date:2023/01 Version:1.0

The information above is believed to be accurate and represents the best information currently available to us.

However, Concorde makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.

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The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

End of report