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MATERIAL SAFETY DATA SHEET

For Rechargeable Polymer Li- Ion Battery HE346 of McNair

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

McNair Polymer Lithium Ion Battery
McNair HE346 3700mAh 3.85V Polymer Li-ion Battery
(Equivalent Lithium content: 1.11g and 14.25Wh/battery pack)
The UN classification number: Class 9
UN Number: UN3480 lithium ion batteries or
UN3481 lithium ion batteries packed with equipment or lithium ion batteries contained in equipment

MANUFACTURER

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2. COMPOSITION INFORMATION

HAZARDOUS INGREDIENTS	%	CAS NUMBER
Lithium Cobalt Dioxide（$LiCoO_2$）	25-35	12190-79-3
Graphite(C)	15-20	7782-42-5
Poly Vinylidene Fluoride(PVDF)	1-5	24937-79-9
Acetylene Black	0.5-3	1333-86-4
Aluminium(AL)	21-23	7429-90-5
Copper (Cu)	10-11	7440-50-8
Carbon(proprietary)	10-30	7440-44-0
Electrolyte	10-15	623-53-0/21324-40-3

3. HAZARDS IDENTIFICATION

Emergency Overview

May explode in a fire, which could release hydrogen fluoride gas and smoke.
Use extinguishing media suitable for materials burning in fire

PRIMARY ROUTES OF ENTRY

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

Skin contact	No
Skin absorption	No
Eye contact	No
Inhalation	No
Ingestion	No

SIGNS AND SYMPTOMS OF EXPOSURE

Skin contact	No effect under routine handling and use
Skin absorption	No effect under routine handling and use
Eye contact	No effect under routine handling and use
Inhalation	No effect under routine handling and use
Ingestion	No effect under routine handling and use
Reported as Carcinogen	Not applicable

4. EMERGENCY AND FIRST AID MEASURES

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard.

INGESTION

If swallowed, obtain medical attention immediately.

CAUTION

If exposure to internal materials within cell due to damaged outer casing, the following actions are recommended.

INHALATION

Leave area immediately and seek medical attention.

EYE CONTACT

Rinse eyes with water for 15 minutes and seek medical attention.

SKIN CONTACT

Wash area thoroughly with soap and water and seek medical attention.

INGESTION

Drink milk/water and induce vomiting; seek medical attention

5. FIRE FIGHTING MEASURES

GENERAL HAZARD

Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

EXTINGUISHING MEDIA

Use extinguishing media suitable for the materials that are burning.

SPECIAL FIREFIGHTING INSTRUCTIONS

If possible, remove cell(s) from fire fighting area. If heated above 130°C, cell(s) may Swell/explode/vent.

If package is damage or heat, the package should be checked and repackaged well.

FIREFIGHTING EQUIPMENT

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6. ACCIDENTAL RELEASE MEASURES

ON LAND

Place material into suitable containers and call local fire/police department.

IN WATER

If possible, remove from water and call local fire/police department.

7. HANDLING AND STORAGE

HANDLING

No special protective clothing required for handling individual cells.

STORAGE

Store in a cool, dry place

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Keep away from heat and open flame. Store in a cool dry place

PERSONAL PROTECTION

Respirator:

Not required during normal operations. SCBA required in the event of a fire

Eye/face protection:

Not required beyond safety practices of employer.

Gloves:

Not required for handling of cells.

Foot protection:

Steel toed shoes recommended for large container handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

State	Solid
Odor	N/A
PH	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

10. STABILITY AND REACTIVITY

REACTIVITY

None during normal operating or handling conditions.

INCOMPATIBILITIES

None (during normal operation). Avoid exposure to heat, open flame, and corrosives

HAZARDOUS DECOMPOSITION PRODUCTS

None (during normal operating conditions). If cells are opened, hydrogen fluoride and carbon monoxide may be released.

CONDITIONS TO AVOID

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

11. TOXICOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use.

Sensitization	No
Acute toxicity	No
Teratogenicity	No
Reproductive toxicity	No

This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in appendix of TCO documents and relevant international ECO requirements.

Polybromated Biphenyls	(PBB)
Polybromated Biphenyl Ethers	(PBBE)
Polybromated Biphenyl Oxides	(PBBO)
Polybromated Diphenylethers	(PBDE)
Polychlorinated Biphenyl	(PCB)
Polychlorinated Diphenylethers	(PCDE)
Tetrabromphisphenol A	(TBBPA)
Asbestos, Antimonytrioxide, Dioxine	/

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

Chlorinated Fluorohydrocarbon (FCKW)
Acrylonitride
Styrol
Phenol
Benzol
Mercury of greater than 0.0001 wt% for alkaline battery
Mercury of greater than 0.0005 wt% for other battery
Polymer content of greater than 0.5g/cell, 1.5g/battery
Cadmium, lead, and other harmful heavy metal

This product does not contain mercury, cadmium and Polymer-metal.

Mercury content	N/A
Polymer-metal	N/A
Cadmium content	N/A

CAUTION
If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers

12. ECOLOGICAL INFORMATION

Some materials within the cell are bio-accumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13. DISPOSAL CONSIDERATIONS

CALIFORNIA REGULATED DEBRIS

RCRA Waste Code: Non-regulated

Dispose of according to all federal, state, and local regulations.

14. REGULATORY INFORMATION

OSHA hazard communication standard (29 CFR 1910.1200)

□ Hazardous ■ Non-hazardous

15. TRANSPORT INFORMATION

Polymer lithium ion batteries containing no more than 20Wh/cell and 100 Wh /battery pack can be treated as “Non-dangerous goods” under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, if packaging is strong ,suitable, limited weight ,and prevent the products from short-circuit. Also concerned mark or label should be appeared on each outer box.

With regard to air transport, the following regulations are cited and considered:
I) The International Civil Aviation Organization (ICAO) Technical Instructions (2017-2018 Edition)
II) The International Air Transport Association (IATA) Dangerous Goods Regulations (59th Edition), Section II of PI967: lithium ion batteries contained in equipment.
Or Section II of PI966: Polymer lithium ion batteries packed with equipment;
Or Section II of PI965: Polymer lithium ion batteries(if >2pcs/carton, it meets Section IB of PI965)；
III) The International Maritime Dangerous Goods (IMDG) Code (2014 Edition) with SP188;
IV) The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA (Part 49 CFR Sections 100-185),
V) The Office of Hazardous Materials Safety within the US Department of Transportation’s (DOT) Research and Special Programs Administration (RSPA), and
VI) The UN Recommendations on the Transport of Dangerous Goods Model Regulations and the Manual of Tests and Criteria (UN38.3)
Our products are properly classified, described, packaged, marked, and labeled, and are

in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1～T8) on the Transport of Dangerous Goods Model Regulations.

Manual of Test and Criteria(38.3 Polymer Lithium ion battery)			
Test Item		Test Results	Remark
T1	Altitude Simulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact	Pass	
T7	Overcharge	Pass	For Pack Only
T8	Forced Discharge	Pass	For Cell Only

16. OTHER INFORMATION

For further information, please contact McNair New Power Co., Ltd. sales representative.
Contact phone number: (+86)769-3197555

Note:
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