PORTAPOWER (CHINA) LIMITED
Flat 1003, 10/F Hopeful Factory Centre,
10-16 WoShing Street, Fotan, N.T. Hong Kong
Tel:（852）26876323 Fax:（852）26876312
e-mail:porta@portapower.com.hk

MATERIAL SAFETY DATA SHEET

Section 1: Chemical Product and Company Identification

Product Name:	Lithium ion batteries
Type/Model Name:	YL-MHX1-HS103B.089REGRN6
Ratings:	Li-ion 36V 8.3Ah/300Wh
Manufacturer:	PORTAPOWER (CHINA) LIMITED
Manufacturer Address:	1003, 10/F.,Hopeful Factory Centre, 10-16 WoShing Street, Fotan, N.T., Hong Kong
Report No.:	PPL-220113002 B
Inspection according to	EEC Directive 93/112/EC UN“Manual of Tests and Criteria”
Emergency telephone call:	852- 26876323

MSDS Prepared by:	 Joe Kwong
Date of issue:	2022-1-13

Section 2: Composition/Information on Ingredients

Chemical Name	CAS #	Percent of Content
Lithium Cobalt Oxide	12190-79-3	35-38
Graphite	7782-42-5	20-22
Copper	7440-50-8	9-10
Aluminum	7429-90-5	5-6
Ethylene carbonate	96-49-1	14-16
Polypropylene	9003-07-0	5-6
Carbonate,methyl ethyl	623-53-0	4-5
Phosphate(1-),hexafluoro,lithium	21324-40-3	5-6

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Section 3: Hazards Identification

Explosive risk	This article does not belong to the explosion dangerous goods
Flammable rist	This article does not belong to the flammable material
Oxidation risk	This article does not belong to the oxidation of dangerous goods
Toxic risk	This article does not belong to the toxic dangerous goods
Radioactive risk	This article does not belong to the corrostion of dangerous goods
Mordant risk	This article does not belong to the corrosion of dangerous goods
Other risk	This article is Li-ion Battery, Watt hour rate168Wh, which belong to the Lithium ion batteries(including lithium polymer batteries)

Section 4: First Aid Measures

Inhalation: Remove from exposure, rest and keep warm, In severe cases obtain medicalattention.
Skin contact: Wash off skin thoroughly with tap water. Remove contaminated clothing andwash before reuse. In severe cases obtain medical attention.
Eye contact: Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention
Ingestion: Wash out mouth thoroughly with water and give plenty of water to drink. Obtainmedical attention.
Further treatment: All cases of eye contamination, persistent skin irritation and casualties whohave swallowed this substance or been affected by breathing its vapours should be seen by aDoctor.

Section 5: Fire Fighting Measures

CO2 extinguishers or copious quantities of water-based foam can be used to cool down burning Li-MnO2 cells and batteries, as long as the extend of the fire has not progressed to the point that the Lithium metal they contain is exposed.

Use only metal (Class D) extinguishers on raw lithium.

Extinguishing Media: Use water or CO2 on burning Li-MnO2 cells or batteries and class D fire extinguishingagent only on raw lithium.

Section 6: Accidental Release Measures

Do not breathe vapours or touch liquid with bare hands.
If the skin has come into contact with the electrolyte it should be washed thoroughly with water.
Earth or sand should be used to absorb the exudation, seal leaking battery and earth in a heavy duty polythene bag and dispose of as Special Waste in accordance with local regulations.

Section 7: Handling and Storage

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Handling: Do not short circuit or expose to temperatures above the temperature rating of battery. Do not recharge, over-discharge, force discharge, immerse, puncture or crush.

Storage: Store in a cool place but prevent condensation on cells and batteries. Elevated temperatures can result in shortened battery life and degrade performance.
Do not store batteries in high humidity environments for long periods of times.

Other: Lithium Manganese dioxide batteries are not rechargeable and should not be tentatively charged.

Follow Manufacturers recommendations regarding maximum recommended currents and operating temperature range.

Applying pressure on deforming the battery may lead to disassembly.

Section 8: Exposure Controls/Personal Protection

Respiratory protection: In all fire situations, use self-contained breathing apparatus.
Hand protection: In the event of leakage wear gloves.
Eye protection: Safety glasses are recommended during handling.
Other: In the event of leakage, wear chemical apron.

Section 9: Physical and Chemical Properties

Odour: If leaking, smells of medical ether.
PH: Not applicable as supplied.
Flash Point: Not applicable unless individual components exposed.
Flammability: Not applicable unless individual components exposed.
Relative density: Not applicable unless individual components exposed
Solubility (water): Not applicable unless individual components exposed
Solubility (other): Not applicable unless individual components exposed

Section 10: Stability and Reactivity

Stability: Product is stable under conditions described in Section 7.
Conditions to avoid: Heat above 70°C or incinerate. Deform. Mutilate. Crush. Pierce.Ying. Disassemble. Recharge. Short circuit. Expose over a long period to humid conditions.
Materials to avoid: Oxidising agents, alkalis, water.
Hazardous reactions: Lithium metal reacts with water to produce highly flammable gasses.
Hazardous decomposition reactions: Toxic Fumes, and may form peroxides.

Section 11: Toxicological Information

Signs & symptoms: None, unless battery ruptures. In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

Inhalation: Lung irritant.
Skin contact: Skin irritant

Eye contact: Eye irritant
Ingestion: Poisoning if swallowed
Medical conditions generally aggravated by exposure: In the event of exposure to internal contents,
moderate to server irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

Section 12: Ecological Information

Mammalian effects: None known at present.
Eco-toxicity: None known at present.
Bioaccumulation potential: Slowly Bio-degradable.
Environmental fate: None known environmental hazards at present.

Section 13: Disposal Considerations

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

Section 14: Transport Information

Label for conveyance: substances and articles of transport class 9 “Miscellaneous Dangerous Goods” label

UN Number: UN3480

Shipping name: Lithium ion Batteries

Hazard Classification: Depending on their watt-hour rating , the tested battery belong to transport class 9materials, The goods shall be complied with the requirements of Section of Packing Instructions 965 Section IA of 63rdDGR Manual of IATA or Packing Instructions 903 of IMDG CODE (Amdt.40-20)(2020 Edition), including the passing of the UN38.3 test,and Applicable U.S. DOT regulations for the safe transport of Lithium ion Batteries

Packing Group: N/A

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EmS No: F-A,S-I

Marine pollutant: No

Section 15: Regulatory Information

Here below are shown the nature of special risks and the advices of caution.

Nature of special risks
R14/15 (reacts with water and yields flammable gases)
R21 (harmful in contact with skin)
R22 (harmful if swallowed)
R35 (causes severe burns)
R41 (risk of serious damage to the eye)
R42/43 (may cause sensitation by inhalation and skin contact)

Safety advices
S2 (keep out of reach from children)
S8 (keep away from moisture)
S22 (do not breathe dust)
S24 (avoid contact with skin)
S26 (in case of contact with eyes, rinse immediately with plenty of water and seek medical attention)
S36 (wear suitable protective clothing)
S37 (wear suitable gloves)
S43 (in case of fire use extinguisher type D. DO NOT USE WATER)
S45 (in case of incident or indisposition seek medical attention)

Section 16: Other Information

This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled, However, no representation, warranty (either expressed or implied) or guarantee is made to the accuracy, reliability, or completeness of the information contained herein.

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