Material Safety Data Sheet

Report No.:	CMC240617006M01
Name of sample:	Lithium-ion Battery
Model:	APS5000
Type:	51.2V 100Ah 5120Wh
Client:	Aeson Power Pty Ltd
Address:	63-67 Smeaton Ave, Dandenong South VIC 3175

Written: Jinsheng Li **Approved:**

Reviewed: Dylan Dou

Date of issue: 2024.06.18 **Seal of CMC:**

CMC Testing International (Shenzhen) Co., Ltd.

Material Safety Data Sheet

Section 1- Identification of the Substance/Preparation and of the Company/Undertaking			
Name of Sample	Lithium-ion Battery	Weight	44.2kg
		Size (L×W×T)	(508.0×481.0×133.0)mm
Model	APS5000		
Holder	Aeson Power Pty Ltd		
Telephone	0474 088 702		
Holder Address	63-67 Smeaton Ave, Dandenong South VIC 3175		
Contact Person	Shirley		
E-mail	shirley@aesonpower.com.au		
Manufacturer	Zhejiang Xupai Power Technology Co., Ltd		
Manufacturer's Address	No. 505, XianQiandong Street, Taihu Street, Changxing County, Huzhou City, Zhejiang Province		
Contact Person	Ms. Liu		
E-mail	762129090@qq.com		
Fax	--		
24h Emergency Phone No.	0474 088 702		

Section 2- Hazards Identification	
Classification of Danger	See section 14.
Primary Route(s) of Exposure	Eye, skin contact, ingestion.
Health Hazard	The batteries are not hazardous when used according to the instructions of

	manufacturer under normal conditions. In case of abuse, there's Hazard of rupture, fire, heat, leakage of internal components, which could cause casualty loss. Abuses including but not limited to the following cases: charged for long time, short circuited, put into fire, whacked with hard object, punctured with acute object, crushed, and broken.

Section 3- Composition/Information on Ingredients

Chemical Name	Concentration or concentration ranges (%)	CAS Number
Lithium iron phosphate	36.8	15365-14-7
Graphite	17.5	7782-42-5
Ethyl methyl carbonate	14.6	623-53-0
Copper Foils	8.2	7440-50-8
Aluminum foil	13.6	7429-90-5
Ethylene carbonate	7.3	96-49-1
Lithium hexafluorophosphate(1-)	2.0	21324-40-3

Labeling according to EC directives.
No symbol and Hazard phrase are required.
Note: CAS number is Chemical Abstract Service Registry Number.
N/A=Not apply.

Section 4- First Aid Measures

Eye	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
Inhalation	Remove from exposure and move to fresh air immediately. Use oxygen if available.
Ingestion	Induce vomiting unless patient is unconscious. Call a physician.

Section 5- Fire Fighting Measures

Characteristics of Hazard	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous Combustion Products	Carbon dioxide.
Fire-extinguishing Methods and	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing Media	
Attention in Fire-extinguishing	Wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6- Accidental Release Measures	
Personal Precautions, protective equipment, and emergency procedures	In case of rupture. Attention! Corrosive material. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Refer to protective measures listed in Sections 7 and 8.
Environmental Precautions	Prevent product 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.

Section 7- Handling and Storage	
Handling	The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.
Storage	Store in a cool, dry, well-ventilated area away from incompatible substances. Store locked up. Keep out of the reach of children.
Other Precautions	In case of rupture. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment.

Section 8 - Exposure Controls/Personal Protection	
Engineering Controls	Use adequate ventilation to keep airborne concentrations low. If used under conditions that generate particulates, the ACGIH TLV-TWA of 3mg/m^3 respirable fraction (10mg/m^3 total) should be observed.
Personal Protective Equipment	Eye and Face Protection: None required for consumer use. If there is a Hazard of contact: Tight sealing safety goggles. Face protection shield. Skin and Body Protection: None required for consumer use. If there is a Hazard of contact: Wear protective gloves and protective clothing. Respiratory Protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Section 9- Physical and Chemical Properties	
Physical State	Appearance: Cuboid
	Color: Black
	Odour: If leaking, smells of medical ether.
Change in condition:	
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	
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to Avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials	Acids, Oxidizing agents, Bases.
Hazardous Decomposition Products	Carbon oxides.

Section 11 – Toxicological Information	
Irritation	In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.
Sensitization	Not Available.

Reproductive Toxicity	Not Available.
Toxicologically Synergistic Materials	Not Available.

Section 12-Ecological Information	
General note:	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Anticipated behavior of a chemical product in environment/possible environmental impact/ ecotoxicity	Not Available.

Section 13 – Disposal Considerations	
Waste Treatment	Recycle or dispose of in accordance with government, state & local regulations.
Attention for Waste Treatment	Deserted batteries shouldn't be treated as ordinary trash. Shouldn't be thrown into fire or placed in high temperature. Shouldn't be dissected, pierced, crushed or treated similarly. Best disposal method is recycling.

Section 14 – Transport Information			
UN number	UN3480 Lithium ion batteries (including lithium ion polymer batteries) (limited to a maximum of 30% SoC) . UN3481 Lithium ion batteries packed with equipment (including lithium ion polymer batteries) .		
Hazard Class:	Class 9	Packing grade:	II
UN number	UN3481 Lithium ion batteries contained in equipments (including lithium ion polymer batteries).		
Hazard Class:	Class 9	Packing grade:	Not restricted
Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.			
ICAO / IATA:	Can be shipped by air in accordance with International Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA), DGR Packing Instructions (PI) 965 Section IA, PI 966 Section I and PI 967 Section I appropriate of IATA DGR 65th (2024 Edition) for transportation.		

IMDG CODE:	Shipping may be done in accordance with the IMDG Code 2022 Edition (Amdt 41-22).		
UN number	UN3480 Lithium ion batteries (including lithium ion polymer batteries) (limited to a maximum of 30% SoC) . UN3481 Lithium ion batteries packed with equipment (including lithium ion polymer batteries) .		
Hazard Class:	Class 9	Packing grade:	II
UN number	UN3481 Lithium ion batteries contained in equipments (including lithium ion polymer batteries).		
Hazard Class:	Class 9	Packing grade:	Not restricted
EmS No.	F-A S-I		
DOT:	Other requirements for the US Department of Transportation (DOT) Subchapter C, Hazardous Materials Regulations if shipped in compliance with 49 CFR 173.185.		
ADR/ ADN:	Transport Requirements for United Nations Economic Commission for Europe (UNECE) ADR/ADN, Applicable as from 1 January 2023.		
In addition, to be permitted in transport each lithium cell and battery types must have passed the applicable tests set out in Subsection 38.3 of the UN Manual of Tests and Criteria. The batteries should be well protected against short circuits.			

Section 15 – Regulatory Information

Dangerous Goods Regulations

Recommendations on the Transport of Dangerous Goods-Model Regulations (23rd revised edition)

Recommendations on the Transport of Dangerous Goods-Manual of Tests and Criteria

International Air Transport Association (IATA)

International Maritime Dangerous Goods (IMDG Code 2022 Edition Amdt 41-22)

Technical Instructions for the Safe Transport of Dangerous Goods

Classification and code of dangerous goods (GB 6944-2012)

2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Toxic Substance Control Act (TSCA)

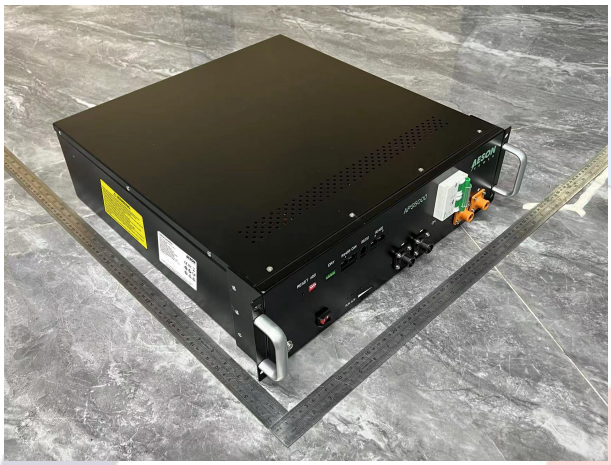
Code of Federal Regulations

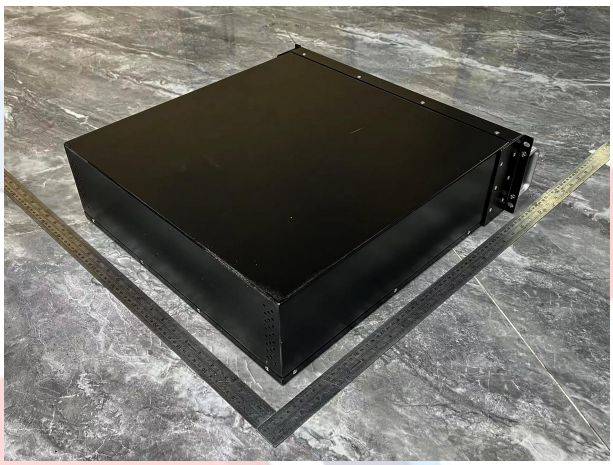
In accordance with all Federal, State and local laws

Section 16 – Additional Information

MSDS creation date: 2024 Version: 1.0

Sample photo:





To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

******End of report******