



Safety Data Sheets (SDSs)

Reference No...... : WTH23X08170642B
Applicant..... : EcoFlow Innovation Ltd.
Address..... : 1st Floor, Building 1, Plant E, Jiehe Industrial City, Shuitian Community, Shiyuan Street, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
Manufacturer..... : EcoFlow Innovation Ltd.
Address..... : 1st Floor, Building 1, Plant E, Jiehe Industrial City, Shuitian Community, Shiyuan Street, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
Sample's name..... : Portable Power Station
Model /Type..... : EFR600
Rating..... : 12.8V, 20Ah, 256Wh
AC Input (Bypass/Dérivation): 100-120V- 50Hz/60Hz 8A Max
AC Output: 100-120V- 5A (total) 50Hz/60Hz
Solar/Solaire: 11-30V==8A 110W Max
Total Output: 484W
Dc Output: 12.6V==8A Max
AC Output (x2): 120V-2.5A 50Hz/60Hz 300W (surge 600W)
USB-A Output (x2): 5V==2.4A 12W Max per port (total 24W)
USB-C Input (x1): 5/9/12/15/20V==3A 60W Max
Weight..... : Approx.3.42 kg
Date of Issue..... : 2023-08-07



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Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name:	Portable Power Station
Chemical Name:	Not Applicable
Synonyms:	Lithium-ion Pack, Lithium-ion Battery, Li-Ion Pack, Li-Ion Battery
Proper shipping name:	LITHIUM ION BATTERIES (including lithium ion battery)
Chemical formula:	Not Applicable
Other means of identification:	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:	Lithium ion battery, 12.8 V, Capacity 20 Ah, Wh rating 256 Wh. NOTE: Chemical materials are stored in sealed case. The toxic properties of the electrode materials are hazardous only if the materials are released by damaging the cell or if exposed to fire. The sealed battery is not hazardous in normal use. The chemical hazards are related to the leaked battery contents. If Transport Code Special Provision 188 applies the batteries will be unregulated for transport.
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Details of the supplier of the safety data sheet

Registered company name:	EcoFlow Innovation Ltd.
Address:	1st Floor, Building 1, Plant E, Jiehe Industrial City, Shuitian Community, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, P.R. China
Telephone:	+86 0755 86660185
Emergency telephone number:	+86 0755 86660185
Fax:	/
Website:	https://www.ecoflow.com
Email:	marketing.cn@ecoflow.com

Australian company name:	EcoFlow Australia Pty Ltd
Address:	Suite 1, Level 8, 50 Margaret Street, Sydney NSW 2000, Australia
Emergency Telephone Number:	Australia Poisons Information Centre: 131 126 EE Group: +61 (0) 397 236 699 Konec Distribution: +61 (0) 493 484 512 Autobacs Australia Pty Ltd : +61 2 8841 9008



SECTION 2 Hazards identification

Classification of the substance or mixture	
Poisons Schedule	Not Applicable
Classification [1]	Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2B, Sensitisation (Respiratory) Category 1, Carcinogenicity Category 1B, Hazardous to the Aquatic Environment Long-Term Hazard Category 4, Acute Toxicity (Oral) Category 4
Legend:	1.Classified by Chemwatch; 2.Classification drawn from HCIS; 3.Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Label elements	
Hazard pictogram(s)	
Signal word	Danger
Hazard statement(s)	
H317	May cause an allergic skin reaction.
H320	Causes eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H413	May cause long lasting harmful effects to aquatic life.
H302	Harmful if swallowed.
Precautionary statement(s) Prevention	
P201	Obtain special instructions before use.
P261	Avoid breathing dust/fumes.
P280	Wear protective gloves and protective clothing.
P284	[In case of inadequate ventilation] wear respiratory protection.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
Precautionary statement(s) Response	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.



P362+P364	Take off contaminated clothing and wash it before reuse.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.
P330	Rinse mouth.
Precautionary statement(s) Storage	
P405	Store locked up.
Precautionary statement(s) Disposal	
P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

Chemical Composition	Molecular Formula	CAS No.	Weight (%)
Lithium iron phosphate	LiFePO ₄	15365-14-7	25-35
Graphite	C	7782-42-5	8-12
Lithium hexafluorophosphate	LiPF ₆	21324-40-3	15-22
Aluminum	Al	7429-90-5	5-8
Copper	Cu	7440-50-8	10-15
High molecular polymer	N/A	N/A	3-5
Nickel	Ni	7440-02-0	0.5-1
Iron	Fe	7439-89-6	22-30

Legend:

- 1.Classified by Chemwatch;
- 2.Classification drawn from HCIS;
- 3.Classification drawn from Regulation (EU) No 1272/2008 - Annex VI;
- 4.Classification drawn from C&L; * EU IOELVs available
- 5.N/A=Not apply.



SECTION 4 First aid measures

Description of first aid measures	
Eye Contact	✧ Generally not applicable. If this product comes in contact with the eyes: ✧ Wash out immediately with fresh running water. ✧ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ✧ Seek medical attention without delay; if pain persists or recurs seek medical attention. ✧ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ✧ Immediately remove all contaminated clothing, including footwear. ✧ Flush skin and hair with running water (and soap if available). ✧ Seek medical attention in event of irritation.
Inhalation	Remove patient to fresh air and seek medical attention.
Ingestion	✧ Not considered a normal route of entry. ✧ If swallowed do NOT induce vomiting. ✧ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ✧ Observe the patient carefully. ✧ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ✧ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ✧ Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.



SECTION 5 Firefighting measures

Extinguishing media

- ✧ Dry chemical powder.
- ✧ BCF (where regulations permit).
- ✧ Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	✧ Alert Fire Brigade and tell them location and nature of hazard. ✧ Wear breathing apparatus plus protective gloves in the event of a fire. ✧ Prevent, by any means available, spillage from entering drains or water courses. ✧ Use fire fighting procedures suitable for surrounding area. ✧ DO NOT approach containers suspected to be hot. ✧ Cool fire exposed containers with water spray from a protected location. ✧ If safe to do so, remove containers from path of fire. ✧ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	✧ Non combustible. ✧ Not considered to be a significant fire risk. ✧ Heating may cause expansion or decomposition leading to violent rupture of containers. ✧ May emit acrid smoke. May emit corrosive and poisonous fumes. Decomposes on heating and produces toxic fumes of: carbon monoxide (CO) carbon dioxide (CO₂) metal oxides
HAZCHEM	2Y



SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:

See section 8

Environmental precautions:

See section 12

Methods and material for containment and cleaning up

Minor Spills	Clean up all spills immediately. Avoid contact with skin and eyes. Place in suitable containers for disposal.
Major Spills	✧ Clean up all spills immediately. ✧ Wear protective clothing, safety glasses, dust mask, gloves. ✧ Secure load if safe to do so. Bundle/collect recoverable product. ✧ Use dry clean up procedures and avoid generating dust. ✧ Vacuum up (consider explosion-proof machines designed to be grounded during storage and use). ✧ Water may be used to prevent dusting. ✧ Collect remaining material in containers with covers for disposal. ✧ Flush spill area with water.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Do not connect the positive terminal to the negative terminal with electrical wire or chain. Avoid polarity reverse connection when installing the battery to an instrument. Do not wet the battery with water, seawater or acid; or expose to strong oxidizer. Keep the battery away from heat and fire. Do not disassemble or reconstruct the battery; or solder the battery directly. Do not give a mechanical shock or deform. Do not use unauthorized charger or other charging method. Terminate charging when the charging process does not end within specified time. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Avoid physical damage to containers.
Other information	✧ Keep dry. ✧ Store under cover. ✧ Protect containers against physical damage.



	✧ Observe manufacturer's storage and handling recommendations contained within this SDS. - Keep out of reach of children. - Store out of direct sunlight ✧ Store away from incompatible materials.
Conditions for safe storage, including any incompatibilities	
Suitable container	Store in original containers.
Storage incompatibility	✧ Avoid reaction with oxidising agents ✧ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

SECTION 8 Exposure controls / personal protection

Control parameters

Ingredients with limit values that require monitoring at the workplace:	
15365-14-7 Lithium iron phosphate(LiFePO ₄)	
TLV (USA)	0.02mg/m ³
MAK (Germany)	0.1mg/m ³

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers

Eyewash stations

Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection:



Tightly sealed goggles

Body protection:

Protective work clothing.

Skin protection:



Protective gloves

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the



resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties	
Appearance	Battery cells in hermetically sealed metal or metal laminated plastic case. No odour.

Physical state	Manufactured	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Not Available	pH as a solution (%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available



SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	✧ Unstable in the presence of incompatible materials. ✧ Product is considered stable. ✧ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Acute toxicity: No data available.

LD/LC50 values relevant for classification:

Not available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

SECTION 12 Ecological information

Toxicity:

Acquatic toxicity:

No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No information available.



SECTION 13 Disposal considerations

Waste treatment methods	
Product / Packaging disposal	✧ Recycle wherever possible or consult manufacturer for recycling options. ✧ Consult State Land Waste Management Authority for disposal. ✧ Bury residue in an authorised landfill. ✧ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required		
Marine Pollutant	NO	
HAZCHEM	2Y	
Land transport (ADG)		
UN number	3480	
UN proper shipping name	LITHIUM ION BATTERIES (including lithium ion battery)	
Transport hazard class(es)	Class	9
	Subrisk	Not Applicable
Packing group	Not Applicable	
Environmental hazard	Not Applicable	
Special precautions for user	Special provisions	188 230 310 348 376 377 384 387 390
	Limited quantity	0
Air transport (ICAO-IATA / DGR)		
UN number	3480	
UN proper shipping name	LITHIUM ION BATTERIES (including lithium ion battery)	
Transport hazard class(es)	ICAO/IATA Class	9
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	12FZ
Packing group	Not Applicable	
Environmental hazard	Not Applicable	
Special precautions for user	Special provisions	A88 A99 A154 A164 A183 A201 A206 A213 A331 A334 A802
	Cargo Only Packing Instructions	See 965
	Cargo Only Maximum Qty / Pack	See 965
	Passenger and Cargo Packing Instructions	Forbidden
	Passenger and Cargo Maximum Qty / Pack	Forbidden



	Passenger and Cargo Limited Quantity Packing Instructions	Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	Forbidden
Sea transport (IMDG-Code / GGVSee)		
UN number	3480	
UN proper shipping name	LITHIUM ION BATTERIES (including lithium ion battery)	
Transport hazard class(es)	IMDG Class	9
	IMDG Subrisk	Not Applicable
Packing group	Not Applicable	
Environmental hazard	Not Applicable	
Special precautions for user	EMS Number	F-A , S-I
	Special provisions	188 230 310 348 376 377 384 387
	Limited Quantities	0
Transport in bulk according to Annex II of MARPOL and the IBC code		
Not Applicable		
Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code		
Product name	Group	
lithium cobaltate	Not Applicable	
graphite	Not Applicable	
ethylene carbonate	Not Applicable	
propylene carbonate	Not Applicable	
diethyl carbonate	Not Applicable	
aluminium	Not Applicable	
copper	Not Applicable	
lithium fluorophosphate	Not Applicable	
vinylidene fluoride homopolymer	Not Applicable	



SECTION 15 Regulatory information

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

Lithium iron phosphate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

Graphite is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Lithium hexafluorophosphate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Aluminium is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Copper is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -Schedule 4

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -Schedule 6

Australian Inventory of Industrial Chemicals (AIIC)

High molecular polymer is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Nickel is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Iron is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)



SECTION 16 Other information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average

PC—STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit.

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

AIRC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List

NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory

NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

*****End of SDS*****