# SAFETY DATA SHEET

Date of issue 07-09-2020 Canada/English

# 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier				
Product Name	Rechargeable Li-ion Cell INR18650-2500mAh			
Other means of identification				
Recommended use of the chemical and res	trictions on use			
Recommended Use	LITHIUM ION BATTERIES			
Uses advised against	No information available			
Details of the supplier of the safety data sheet				
Initial supplier identifier	Henan Great Power Energy Co., Ltd.			
Address	The northwest corner of the intersection of Zhongyuan Avenue and Huaihe Avenue, Zhumadian, Henan			
Telephone	+86 18860808280			
E-mail	1217487898@qq.com			
Emergency telephone number				
Company Emergency Phone Number	+86 18860808280			

# 2. HAZARDS IDENTIFICATION

#### **Classification**

This is a battery. In case of rupture:.

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

#### GHS Label elements, including precautionary statements

#### Danger

#### Hazard statements

This is a battery. In case of rupture:.

Causes skin irritation Causes serious eye irritation Suspected of causing cancer Causes damage to organs through prolonged or repeated exposure



#### **Precautionary Statements - Prevention**

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product

#### **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention Specific treatment (see supplemental first aid instructions on this label)

#### Eves

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

#### Skin

IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse

#### **Precautionary Statements - Storage**

Store locked up

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

#### Other information

Very toxic to aquatic life with long lasting effects

#### Unknown acute toxicity

30.9 % of the mixture consists of ingredient(s) of unknown toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS-No	Percent (%)	Hazardous Material	Date HMIRA filed and

			Information Review Act registry number (HMIRA registry #)	date exemption granted (if applicable)
Cobalt lithium manganese nickel oxide	182442-95-1	28.4	-	-
Aluminum	7429-90-5	2.5	-	-
Copper	7440-50-8	5.7	-	-
Iron	7439-89-6	31.1	-	-
Polypropylene	9003-07-0	2	-	-
Dimethyl carbonate	616-38-6	3.8	-	-
Diethyl carbonate	105-58-8	4.7	-	-
Ethylene carbonate	96-49-1	3.4	-	-
Graphite	7782-42-5	17.1	-	-
Phosphate(1-), hexafluoro-, lithium	21324-40-3	1.3	-	-

# 4. FIRST AID MEASURES

First	aid	measures

General advice	First aid is upon rupture of sealed battery. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).
Most important symptoms and effects, both	acute and delayed
Symptoms	Burning sensation.
Indication of any immediate medical attention	on and special treatment needed
Note to physicians	Treat symptomatically.
5. FIRE-FIGHTING MEASURES	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.
Hazardous Combustion Products	Carbon oxides.

Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.		
Other Information	Refer to protective measures listed in Sections 7 and 8.		
Environmental precautions			
Environmental precautions	Prevent further leakage or spillage if safe to do so.		
Methods and material for containment and cleaning up			
Methods for containment	Prevent further leakage or spillage if safe to do so.		
Methods for cleaning up	Pick up and transfer to properly labeled containers.		
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.		

## 7. HANDLING AND STORAGE

Precautions for safe handling	
Advice on safe handling	In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Exposure Limits** 

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Graphite	TWA: 2 mg/m <sup>3</sup>	TWA: 2	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>

		I		
7782-42-5		mg/m <sup>3</sup>		
Phosphate(1-), hexafluoro-, lithium	TWA: 2.5	TWA: 2.5	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>
21324-40-3	mg/m <sup>3</sup>	mg/m <sup>3</sup>		
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 controls	Showers Eyewash station Ventilation syste			
Individual protection measures, such as p	personal protective	equipment		
Eye/face protection	If splashes are	likely to occur, v	vear safety glasses with si	ide-shields.
Hand protection	Wear suitable g	Wear suitable gloves. Impervious gloves.		
Skin and body protection	Wear suitable p	rotective clothin	g. Long sleeved clothing.	
Respiratory protection			ded under normal use cor perienced, ventilation and	
General hygiene considerations	drink or smoke immediately afte	when using this er handling the	d industrial hygiene and sa product. Wash hands bef product. Wear suitable glo kin, eyes or clothing.	

# 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties	
Physical state	Solid
Appearance	No information available
Odor	No information available
Color	No information available
Odor Threshold	No information available

Property_	Values	Remarks Method
рН	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water0		
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known

Dynamic viscosity Explosive properties Oxidizing properties	No data available No information available. No information available.	None known
Other Information Softening Point Molecular Weight VOC Content (%) Liquid Density Bulk Density Particle Size Particle Size Distribution	No information available No information available No information available No information available No information available No information available No information available	

# **10. STABILITY AND REACTIVITY**

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides.

## 1

11. TOXICOLOGICAL INFORMATION		
Information on likely routes of exposure		
Product Information	Product does not present an acute toxicity hazard based on known or supplied information In case of rupture:	
Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.	
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). Irritating to eyes.	
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).	
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
Information on toxicological effects		
Symptoms	Redness. May cause redness and tearing of the eyes.	
Numerical measures of toxicity		
Acute Toxicity		
The following values are calculated based on charter 2.1 of the CHS desument		

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	12,452.00 mg/kg
ATEmix (dermal)	9,132.00 mg/kg

#### Unknown acute toxicity

30.9 % of the mixture consists of ingredient(s) of unknown toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### **Component Information**

Delayed and immediate effects as well as chronic effects from short and long-term exposure	

Skin corrosion/irritation	Classification based on data available for ingredients. Irritating to skin.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Irritating to eyes.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	Classification based on data available for ingredients. Contains a known or suspected carcinogen.

The table below indicates whether each agency has listed any ingredient as a carcinogen. **Legend** 

ACGIH (American Conference of Governmental Industrial Hygienists) A3 - Animal Carcinogen IARC (International Agency for Research on Cancer) Group 2B - Possibly Carcinogenic to Humans NTP (National Toxicology Program) Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	No information available.

### **12. ECOLOGICAL INFORMATION**

Ecotoxicity	Very toxic to aquatic life with long lasting effects.	
-		
Persistence and Degradability	No information available.	
Bioaccumulation		
	•	
Component Information		

Mobility	No information available.
Other adverse effects	No information available.
13. DISPOSAL CONSIDERATION	IS
Waste treatment methods	
Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
14. TRANSPORT INFORMATION	
Note:	The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule) Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"
TDG	Not regulated
<u>DOT</u> Proper Shipping Name Hazard Class Emergency Response Guide Number	NOT REGULATED NON-REGULATED N/A 147
MEX_	Not regulated
ICAO	Not regulated
IATA Proper Shipping Name Hazard Class	Not regulated NON REGULATED N/A
IMDG/IMO Hazard Class EmS-No.	Not regulated N/A F-A, S-I
<u>RID</u>	Not regulated
ADR	Not regulated
ADN	Not regulated
	NI

# **15. REGULATORY INFORMATION**

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

#### International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

- EINECS/ELINCS European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** Japan Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

## **16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

NFPA	Health hazardsFlammability Instability 0	Physical and Chemical
HMIS	Health hazardsFlammability Physical hazards 0	Properties - Personal Protection X
Prepared By	Guangzhou CP-UP Certification Technology Service Co	)., Ltd
Issuing Date	07-09-2020	
Revision Note	No information available	

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

#### End of Safety Data Sheet

Inhalation Statement Not Hazardous Hazard statements Signal word Precautionary Statements	dust This is a battery. In case of rupture: Causes damage to organs through prolonged or repeated exposure Danger P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P321 - Specific treatment (see supplemental first aid instructions on this label) P332 + P313 - If skin irritation occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes

Signal word Skin corrosion/irritation Hazard statements Signal word Serious eye damage/eye irritation Hazard statements Signal word Carcinogenicity Hazard statements Signal word Specific target organ toxicity (repeated exposure) Skin corrosion/irritation Serious eye damage/eye irritation Carcinogenicity STOT - repeated exposure STOT - repeated exposure

Graphic

Graphic

Graphic

Hazard statements

Hazard statements

Precautionary Statements - EU (§28, 1272/2008)

**Precautionary Statements** 

irritation persists: Get medical advice/attention P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/ container to an approved waste disposal plant Danger Category 2 Causes skin irritation Warning Category 2A Causes serious eye irritation Warning Category 2 Suspected of causing cancer Warning Category 1 - (H315) - (H319) - (H351) - (H372)

Causes skin irritation Causes serious eye irritation Suspected of causing cancer Causes damage to organs through prolonged or repeated exposure

H315 - Causes skin irritation H319 - Causes serious eye irritation H351 - Suspected of causing cancer H351 - Suspected of causing cancer H372 - Causes damage to organs through prolonged or repeated exposure H372 - Causes damage to organs through prolonged or repeated exposure

P103 - Read label before use P280 - Wear face protection P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish P234 - Keep only in original container P303 - IF ON SKIN (or hair):

IF ON SKIN: Wash with plenty of water and soap IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention If skin irritation occurs: Get medical advice/attention Take off contaminated clothing And wash it before reuse Take off contaminated clothing and wash it before reuse Take off contaminated clothing And wash it befor

	before reuse Take off contaminated clothing and wash it before reuse IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention If eye irritation persists: Get medical advice/attention If eye irritation persists: Get medical advice/attention second and understood Do not handle until all safety precautions have been read and understood Do not handle until all safety precautions have been read and understood Do not handle until all safety precautions have been read and understood Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product Do not eat, drink or smoke when using this product Get medical advice/attention if you feel unwell
Skin	IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical
Precautionary Statements	advice/attention Take off contaminated clothing and wash it before reuse P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P321 - Specific treatment (see supplemental first aid instructions on this label) P332 + P313 - If skin irritation occurs: Get medical advice/attention P362 + P364 - Take off contaminated clothing and wash it before reuse P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P280 - Wear protective gloves/protective clothing/eye protection/face protection P308 + P313 - IF exposed or concerned: Get medical advice/attention P405 - Store locked up P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/ container to an approved waste
	disposal plant
Precautionary Statements - Prevention	Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product
Precautionary Statements - Response	IF exposed or concerned: Get medical advice/attention Specific treatment (see supplemental first aid instructions on this label)
Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
Skin	present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse
Precautionary Statements - Storage Precautionary Statements - Disposal The following values are calculated based on chapter 3.1 of the GHS document	Store locked up Dispose of contents/container to an approved waste disposal plant
ATEmix (oral)	12,452.00
Units ATEmix (dermal)	mg/kg 9,132.00
Units	mg/kg
Contains Carbon black, Phosphate(1-), hexafluoro-, I	
Unknown acute toxicity	90.77 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Unknown Acute Aquatic Toxicity	90.77
Unknown Chronic Aquatic Toxicity Product ATE Oral Status	90.77
Product ATE Dermal Status	1
Product ATE Inhalation - Gas Status	1
Product ATE Inhalation - Vapor Status Product ATE Inhalation - Dust/Mist Status	1
Product Skin Corrosion Status	1
Product Eye Damage Status Product Respiratory Sens. Status	
Product Respiratory Sens. Status Product Skin Sensitization Status	1
Product Mutagenic Status	1
Product Carcinogenic Status Product Reproductive Toxicity Status	1
Product STOT Single Status	1
Product STOT Repeated Status Product Aquatic Toxicity Status	1
Product Aquatic Toxicity Status	1
Product Ozone Status	1

Product and Component Overall Classification Status 1

## STOT - repeated exposure

- (H372) 30.9 % of the mixture consists of ingredient(s) of unknown toxicity

### Unknown acute toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Symbols/Pictograms

Symbols/Pictograms

Other hazards Health hazards Health hazards Inhalation Statement Health hazards Very toxic to aquatic life with long lasting effects Skull and Crossbones Exclamation mark dust 1