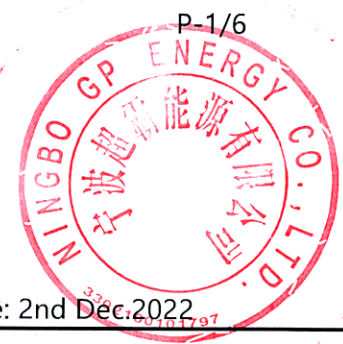


Material Safety Data Sheet

Lithium Battery

Date: 2nd Dec.2022



1. Product & Manufacturer

(1) Product Classification Lithium Battery

(2) Battery Nominal Voltage & Aggregate Lithium Content

Battery Model	Nominal Voltage	Aggregate Lithium Content	
		Weight	Percentage
CR17450	3	0.84g	3.94%
CR17335	3	0.56g	3.57%
CR17450G	3	0.79g	3.70%
CR17335G	3	0.54g	3.44%
CR14250	3	0.27g	2.69%
CR2/3A	3	0.56g	3.57%
CR123A	3	0.56g	3.57%
CR2	3	0.27g	2.69%
CR-P2	6	1.12g	3.02%
2CR5	6	1.12g	2.87%
CR-V9	9	0.81g	2.40%

(3) Manufacturer

NINGBO GP ENERGY CO., LTD

Address: No.58 Zhongche Road, Yinzhou District, Ningbo, Zhejiang, China

Postcode: 315040

Emergency Telephone Number

Situ Lumin : TEL + 0 0 8 6 - 5 7 4 - 8 7 7 3 - 6 3 3 5

[Remark]

Batteries are neither chemical substance nor mixture, but products.

The chemicals are sealed in outercan to prevent from outflux in the metal steel case for durability.

No harm to health under normal usage and adequate transportation method.

This instruction states the potential danger generating from non-intended use, for the explanations of chemicals in the batteries, cautions for storage and regulations for transportation.

2. Components of the Battery

Component	CAS No.	Content
Manganese-Dioxide	1313-13-9	30 ~ 40 wt%
Lithium Metal	7439-93-2	2 ~ 4 wt%
Electrolyte [Organic Electrolyte Mixture]	-	10 ~ 14 wt%
Iron	7439-89-6	32 ~ 38 wt%
Carbon	7440-44-0	3 ~ 5 wt%
Polypropylene	9003-07-0	2 ~ 4 wt%
Polyethylene	9002-88-4	1 ~ 2 wt%
Others	-	3 ~ 4 wt%

3. Risk

- ① Significant Risk No reference
 - ② Peculiar Risk No reference
 - ③ General avoidable issues:
 - Chemicals in the steel can may leak without proper storage.
 - Rupture or fire may happen to battery if disposed in fire or placed over 100°C.
 - Heat, rupture and fire may happen to battery if short-circuit caused by stack or mixture.
- ※GHS classifications do not apply to our batteries.

4. First Aid Measures

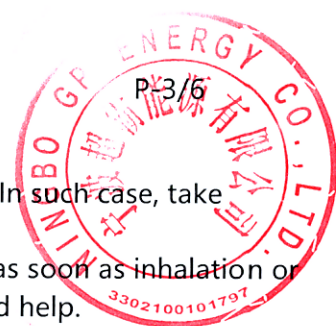
Case	First Aid Measures
Inhalation	Seek fresh air and immediately get medical attention after inhaling leaking component.
Skin Contact	Wash affected area with plenty of soap and water. If irritation develops, get medical attention.

Eye Contact	Flush with water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion	Get medical attention immediately if ingestion.

5. Fire Extinction Measures

Fire extinguisher: Carbon dioxide; fire foam; dry sand; water spray and powder etc.

Means of extinction: Remove batteries to safe place to avoid fire spread. Use water, carbon dioxide, powder if the materials for packing is paper. Burning vapour may cause irritation to eyes, nose and throat. Hence, it is suggested put out the fire in the draught. Use mask when necessary.



6. Measures for Leakage

If misuse the battery at application, the chemicals in steel can may vent. In such case, take measures below:

Health Cautions: The electrolyte may not cause great damage to health as soon as inhalation or contact to skin, but it should be cleaned immediately, and fresh air would help.

Environmental Cautions: Clean thoroughly, no significant damage to environment.

Measures/container for collection, neutralization and crimping:

Collect in an empty container and dispose according to regulations.

7. Storage

Caution:

- (1) Do not dispose batteries to fire in case of charge, short-circuit, disassembling, disformation or heat.
- (2) Do not stack or mix batteries.
- (3) Do not place batteries in metal container, metal sheet or antistatic materials.
- (4) Batteries should be changed at the same time when used in a multiple-cell applied device.
- (5) Stored in a dry and cool place with good ventilation.
- (6) Avoid water, snow, frost or condensation of moisture when packing.
- (7) Do not place batteries near heat or hot air outlet.
- (8) Do not expose batteries to sun directly.
- (9) Avoid condensation of moisture when transferring batteries from cold to hot place.
- (10) Provide several fire extinguishers in the warehouse.

8. Exposure Control and Protective Measures

No special protection tools needed for normal usage. In case of abnormal use in devices or appliances, electrolyte may leak and certain protection tools should be used as below:

Respiratory protective equipment: Respirators (with apparatus respiratorius)

Hand protective equipment: Synthetic rubber gloves

Eye protective equipment: Protective spectacles

9. Physical/Chemical Property

States: Solid

Form: Dihedral



1 4 . Transportation Information

*Attention, the latest regulation shall prevail, and the specifications of transportation and its difference shall be confirmed with the carrier.

All single lithium-metal cells or battery packs are considered as Class 9 according to international standards as shown below. The transport of lithium-metal cells or battery packs should meet requirements defined in International Transport Regulations. All of our products (defined in chapter 1) and its packing forms meet the requirements of UN Manual of Test and Criteria, Part III, subsection. Besides, the following transportation requirements shall be met when delivery.

< Air Transport >

Lithium metal battery. The goods meet the requirements in General Requirements and section II of Packaging Instruction 968. The goods are packaged according to the Packaging Instruction 968 section II. Cargo Aircraft Only. All batteries produced by our company, including single cells with aggregate lithium content more than 0.3g but less than 1g or battery pack models with aggregate lithium content more than 0.3g but less than 2g, conform to 968 Section IB or II defined in Packing Instruction of IATA-DGR. All of our products and its packing forms meet the requirements of Section IB or II, though the battery itself is considered as dangerous goods, it can be transported without applying containers defined as Class II.

< Sea Transport >

All batteries produced by our company, including single cells with aggregate lithium content less than 1g or battery pack models with aggregate lithium content less than 2g, conform to special regulation 188 and transport condition defined in IMDG-Code. It can be transported as non-

UN No.	Proper Shipping Name/Description
UN 3090	Lithium Metal Batteries
UN 3091	Lithium Metal Batteries Contained in Equipment
UN 3091	Lithium Metal Batteries Packed with Equipment

Related Regulation:

Transport form	Relevant agencies/Issued documents
Air transport	ICAO/ TI IATA/ DGR
Sea transport	IMO/ IMDG Code
Land transport (within Europe)	RID, ADR

US/Internation	USDOT/ DOT 49 CFR
	UN: Recommendations on the transport of dangerous goods: Manual of Tests and Criteria 7th revised edition Amendment 1 [ST/SG/AC.10/11/Rev.7(2019)/Amend.1(2021)]:PartIII, Subsection 38.3

*1 Dangerous Goods Regulations – 64th Edition Effective 1 January 2023: International Air Transport Association (IATA)/Packaging Instructions 968-970

*2 IMDG Code 40-20

*3 RID - COTIF 1999/Appendix C-RID/Article 5



1 5 . Regulatory information

Related environment regulations for batteries: EU countries according to the Battery Directive 2006/66/EC, and other countries like China, Korea, Brazil, North America or Canada have similar regulations.

1 6 . Others

Reference

- (1) IATA DGR(Dangerous Goods Regulations), latest edition
- (2) Notice defined in air transport regulations for dangerous goods may cause explosion.

This instruction established based on the normal use of the battery, without any insurance.