Material Safety Data Sheet

1. Product & Company Identification

Product name:	Lithium Manganese-Dioxide Battery, non-rechargeable, CR2450

Size	Nominal Voltage	Capacity	Energy content
CR2450	3.0 V	580 mAh	1.74 Wh

Manufacturer:	Conrad Electronic SE
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
Date of issue:	01.01.2024

2. Hazards Identification

This contains lithium, organic solvent, and other combustible materials. For this reason, improper handling of the battery could lead to distortion, leakage*, overheating, explosion, or fire and cause human injury or equipment trouble. Please strictly observe safety instructions.

(*leakage is defined as an unintended escape of liquid from a battery)

3. Composition/Information on Ingredients

Chemical Name	Common Name and Synonyms	CAS#	% by weight
Manganese Dioxide	MnO2	1313-13-9	25 to 40
Propylene Carbonate	C4H6O3	108-32-7	2 to 6
1,2-Dimethoxyethane	C4H10O2	110-71-4	0 to 5
Lithium Perchlorate	LiClO4	7791-03-9	0.1 to 2
Lithium	Li	7439-93-2	1 to 4
Graphite	C	7782-42-5	1 to 4
Nickel	Ni	/	0 to 1
Stainless steel	/	12597-68-1	20 to 55
Polypropylene	(C3H6)n	9003-07-0	0.2 to 5

Lithium content for each cell: 0.165g

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4. First Aid Measures

None unless internal materials are exposed.

Inhalation

Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.

Skin

Immediately flush skin with plenty of water. If itch or irritation by chemical burn persists, consult a physician.

Eyes

Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately

Ingestion

If swallowing a battery, consult a physician immediately. If contents come into mouth, immediately rinse by plenty of water and consult a physician.

5. Fire Fighting Measures

Extinguishing Media:

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

6. Accidental Release Measures

NA

7. Handling and Storage

1) Handling

Never swallow. Never charge. Never heat. Never expose to open flame. Never disassemble. Never reverse the positive and negative terminals when mounting. Never short-circuit the battery. Never weld the terminal or wire to the body of the battery directly.

Never use different batteries together. Never touch the liquid leaked out of battery. Never bring fire close to battery liquid. Keep away from children.

2) Storage

Never let the battery contact with water. Never store the battery in hot and high humid place.

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8. Exposure Controls/Personal Protection

Respiratory Protection		N/A
Ventilation	Local Exhaust	N/A
	Mechanical	N/A
	Special	N/A
	Other	N/A
Eye Protection		N/A
Protective Glove		N/A
Other protective clothing		N/A

9. Physical/Chemical Characteristics

Nominal Voltage: 3.0V

10. Stability and Reactivity

Stability

Stable

Incompatibility

Water

Hazardous polymerization

Will not occur

Condition to avoid

See section 7

Hazardous Decomposition or Byproducts

Hydrogen

11. Toxicological Information

NA

12. Ecological Information

NA

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13. Disposal condition

The battery may be regulated by national or local regulation. Please follow the instructions of proper regulation. As electric capacity is left in a discarded battery and it meets other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

14. Transportation Information (Air, Sea, Land)

1. Battery must be of a design type proven to meet testing requirements as per Manual of test and criteria, Part III, subsection 38.3.

2. Battery, according to Section IB of PACKING INSTRUCTION 968 of the 2024 IATA Dangerous Goods Regulations 65rd Edition, may be transported/applicable to U.S D.O.T regulations for the safe transport of Lithium Battery.

3. Battery to be protected to prevent short circuit. This includes protection against JYSD106.2024 contact with conductive materials within the same packaging that could lead to short circuit.

4. Cells and batteries, offered for transport, must be packed in inner packaging that completely enclose the cell or battery; To provide protection form damage or compression of the batteries, the inner packaging must be placed in a strong rigid outer packaging.

5. The packaging shall be adequate to avoid mechanical damage during transport, handling, and stacking & Stock on shelves. The material and pack design shall be chosen to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

6. The package must be handled with care as a flammability hazard exists if the package is damaged.

7. Regarding transport, the following regulations are cited and considered

-The International Civil Aviation Organization (ICAO)Technical Instructions.

-The International Air Transport Association (IATA) Dangerous Goods Regulations.

8. UN Number lithium metal batteries (UN3090)

lithium metal batteries packed with equipment (UN3091)

lithium metal batteries contained in equipment (UN3091)

UN Proper shipping name /Description (technical name): Lithium Primary/Metal batteries

Marine pollutant(Y/N): Y

Special Provision:

International maritime dangerous goods code (IMDG) 188,230,310,348,957;

-The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA.

-The Office of Hazardous Materials Safety within the US Department of Transportation's (DOT) Research and Special Programs Administration (RSPA)

15. Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

_____Hazardous____√____Non-hazardous

16. Other Information

If you want further information, please contact us.