



Material Safety Data Sheet

1. Identification of Substance

Product Details

Product Name: Alkaline Dry Battery

Product Model: R20, R14, R6, R6SAA, R03, R03AAA, 6F22, LR20, LR14, LR6, LR03, 6LR61

Manufacturer/Supplier By: Tenergy Corporation, Address: 436 Kato Terrace Fremont, CA, 94539, USA

2. Hazards Identification

Hazard description: These batteries are no "substances" or "mixtures" according to Regulation (EC) No 1907/2006 EC. Instead they have to be regarded as "articles", no substances are intended to be released during handling. Therefore there is no obligation to supply a "safety data sheet according to Regulation (EC) 1907/2006, Article 31".

Routes of Entry: Not applicable under normal conditions.

Health Hazards: If battery leaking, exposure to caustic ingredients may occur. Therefore, may cause Sensitization by skin contact.

Hazards to Environment: Not applicable.

Fire and Explosion Hazards: Not applicable.

3. Composition/Data on Components

COMPONENT	CAS No.	% By wt.
Zn	7440-66-6	23%-27%
Mno ₂	1313-13-9	27%-31%
C	7782-42-5	3%-4%
(C ₃ H ₆) _n	9003-07-0	2%-3%
CU	7440-50-8	1%
KON	1310-58-3	4.5%-5.5%
H ₂ O	7732-18-5	8%-9%
Fe	7439-89-6	17%-19%
Cr	7440-47-3	4%-5%
Ni	7440-02-0	1.5%-2.5%

4. First aid Measures

None unless internal materials exposure. If contents are leaked out, observe following instructions.

Eyes: Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin: Remove contaminated clothing. Wash with plenty of soap and water. If irritation occurs, get medical



attention.

Inhalation: Move to fresh air. If symptoms persist, call a physician.

Ingestion: If swallowing a battery, consult a physician immediately

5. Fire Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water fog.

Special hazards arising from the Battery may explode or leak if recharged or in fire. Contact with combustible substance or mixture : material may cause fire. Short-circuit batteries may cause burns. Electrolyte solution is corrosive to all human tissues. Fire will produce toxic gases/fumes and black smoke.

Special Fire-Fighting Procedures: As in any fire, firefighters should wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

6. Accidental Release Measures

Chemical contents are sealed in metal can. However, if the battery is mechanically or electrically abused, contents may leak out. In such case, take action as showing below.

Personal precautions:

Temporary attaching of electrolyte to skin does not cause serious health hazard. Be sure the ventilation and washing out of electrolyte quickly.

Protective equipment:

No further relevant information available.

Environmental precautions:

Avoid leakage getting into the earth, ditches, or waters. Avoid directly releasing the washing wastewater into the environment.

Methods and materials for containment and cleaning up:

If the electrolyte leaks, use dry soil, dry sand, or other non-combustible materials to absorb and cover the leakage. Sweep up with spade and transfer to a dry, clean, lidded container for disposal. Avoid raising dust. Ventilate the area and wash spill site after material pickup is complete.

7. Handling and Storage

Handling:

Do not recharge batteries.

Do not short circuit or install incorrectly.

Do not open, disassemble, puncture or deform. Avoid mechanical or electrical abuse.

Do not carry batteries loose in a pocket or bag. Do not swallow batteries.

Keep batteries away from children.

Do not mix with used or other types of batteries together.

Do not remove the battery label. Do not throw batteries into water or fire.

Always follow the warning information on the batteries and in the manuals of devices.

In case of battery change always replace all batteries by new.

Storage:

Store in a cool, dry and ventilated place at room temperature.

Avoid large temperature changes.

Do not refrigerate batteries - this will not make them last longer.

If possible, store the batteries in original packaging (short circuit protection). Protect from physical damage.

For storage of large amounts, a fire alarm is recommended in the storehouse. Protect from moisture and sunlight.

Keep away from heat and ignition sources. - No smoking.

Keep away from combustible materials and incompatible materials. Keep out of reach of children.

8. Exposure Controls and Personal Protection





Respiratory protection: In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

Ventilation: Not necessary under conditions of normal use.

Protective Gloves: Not necessary under conditions of normal use.

Other Protective Clothing or

Equipment: Not necessary under conditions of normal use. If the battery leaks, must wear the following protection products.

	Respiratory protection	In all fire situations, use self-contained breathing apparatus.
	Hand protection	In the event of leakage wear gloves.
	Eye protection	Safety glasses are recommended during handling.
	Other	In the event of leakage, wear chemical apron.

9. Physical and Chemical Properties

General Information

Form:	Solid
Color:	Multicolor
Odor:	Odorless
Boiling Point:	No data available
Melting Point:	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Solubility In Water:	No data available
Specific Gravity (H ₂ O = 1):	No data available
pH:	No data available
Freezing Point:	No data available
Molecular Weight:	Mixture, Not Applicable

10. Stability and Reactivity

Chemical Stability: This material is chemically stable under normal and storage and handling conditions.

Conditions to Avoid: Elevated temperatures fire and ignition sources, mechanical abuse and electrical abuse.

Hazardous Decomposition

Products: When exposed to fire or extreme heat, batteries may emit toxic fumes.

11. Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened.

Exposure to internal contents, the corrosive fumes will be irritation to skin, eyes and mucous membranes.

Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

12. Ecological Information

Environmental Impact: Proper use and disposal of the battery will not harm the environment.

Dispose of the battery, away from water, rain and snow.

13. Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation

Dispose of the battery in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.



14. Transport Information

The Batteries in all forms of transportation (e.g. Truck, air, or sea) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in (Strong Carton / Packaging) that prevents spillage of contents.

DRY BATTERY (sometime referred to as "Dry Cell" are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, The IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, (2025 IATA Dangerous Goods Regulations 66th Edition),, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirement contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

Batteries are packed in such away to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the airwaybill, when an airwaybill is issued.

15. Regulations

UN Model Regulations Rev. 23 (2023)

ICAO Emergency Response Guidance, 2025-2026 Edition

IATA (International Air Transport Organization): Dangerous Goods Regulations 66th Edition; Effective January 1st, 2025

ADR 2025 - Agreement concerning the International Carriage of Dangerous Goods by Road IMDG Dangerous Goods 42-24 2025 Regulations

EU Battery Directive (EU) 2023/1542

16. Other Information

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and maybe beyond

**Tenergy Corporation**

436 Kato Terrace, Fremont, CA 94539

Tel: 510.687.0388 Fax: 510.687.0328

www.Tenergy.com email: sales@tenergy.com

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