

Material Safety Data Sheet

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1. Identification of Substance

Product Details

Product Name: ALKALINE ZINC-MANGANESE DRY BATTERY AAA LR03 1.5V

APPLICATIONS: For Stock No. 41821 Automotive Digital Multimeter

Manufacturer/Supplier By: Draper Tools Ltd

Hursley Road
Chandlers Ford
Eastleigh
Hampshire
SO53 1YF

Draper Helpline +44 (0) 2380 494344
Opening hours 8:30-17:00 Monday – Friday.

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.
Zinc	7440-66-6	14.57%
Manganese Dioxide	1313-13-9	38.53%
Graphite	7782-42-5	2.70%
Zinc oxide	1314-13-2	0.39%
Plastic	32131-17-2	1.12%
Copper	7440-50-8	3.79%
Iron	7439-89-6	23.28%
Water	7732-18-5	9.22%
Potassium hydroxide	1310-58-3	5.26%

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4. First aid Measures

Eyes:	To flush with clean water for fifteen minutes, If the allergy remains uncured, please turn to a doctor for help.
Skin:	Remove contaminated clothing. Wash with plenty of soap and water. If irritation occurs, get medical attention.
Inhalation:	Remove from exposure, rest and keep warm. In severe cases obtain medical attention.
Ingestion:	Rinse mouth with water and drink plenty of water. Consult a doctor.
Further treatment:	All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapours should be seen by a Doctor.

5. Fire Fighting Measures

Flash Point:	N/A.
Auto-ignition Temperature:	N/A.
Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unusual Fire and Explosion Hazards:	Cell may vent when subjected to excessive heat-exposing battery contents.
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, and other metal oxide fumes.
Special Fire-Fighting Procedures:	Wear full protective clothing and NIOSH-approved self-contained breathing apparatus. Avoid inhalation of material or combustion by-products.

6. Accidental Release Measures

Steps to be Taken In case Material is Released or Spilled

If the battery is accidentally broken and electrolyte leaks out, wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can.

The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Waste Disposal Method

It is recommended to discharge the battery to the end, handing in the abandoned battery to related department unify, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

7. Handling and Storage

Do not charge. The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

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Store in a dry, cool and well-ventilated area.

Do not short circuit terminals, or charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other Precautions

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

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.

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9. Physical and Chemical Properties

General Information

Form:	Solid
Color:	Orange, golden, white, green
Odor:	Odorless
Voltage:	1.5V

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

When promptly used or disposed the battery does not present severe environmental hazard. When disposed, keep 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 are considered to be "dry cell" batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA), the International Maritime Organization (IMO), the "Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route" (ADR) and the "Règlement concernant le transport international ferroviaire de marchandises Dangereuses" (RID).

The requirements for shipping these batteries, in all modes of transportation, are that they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits. Products must also be packed

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in strong packaging that can withstand the rigors normal to transportation.

All batteries are packed in such a way 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 IATA Dangerous Goods Regulations 2022 (63rd Edition) Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

Shock and vibration shall be kept to a minimum. For instance, boxes should not be thrown off trucks, slammed into position or piled so high as to overload battery containers below. Protection from inclement weather should be provided.

15. Regulations

Law Information

- 《Dangerous Goods Regulation》
- 《Recommendations on the Transport of Dangerous Goods Model Regulations》
- 《International Maritime Dangerous Goods》
- 《Technical Instructions for the Safe Transport of Dangerous Goods》
- 《Classification and code of dangerous goods》
- 《Occupational Safety and Health Act》 (OSHA)
- 《Toxic Substances Control Act》 (TSCA)
- 《Consumer Product Safety Act》 (CPSA)
- 《Federal Environmental Pollution Control Act》 (FEPCA)
- 《The Oil Pollution Act》 (OPA)
- 《Superfund Amendments and Reauthorization Act Title III (302/311/312/313)》 (SARA)
- 《Resource Conservation and Recovery Act》 (RCRA)
- 《Safety Drinking Water Act》 (CWA)
- 《California Proposition 65》
- 《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and Local laws.

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 may be beyond our knowledge. For this and other

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