

Material Safety Data Sheet

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Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name R03 battery/1.5V

Recommended Use Carbon Zinc Battery. Alkaline battery.

Supplier Address

Dongguan Large Electronics Co., Ltd.
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2. HAZARDS IDENTIFICATION

CAUTION!

Emergency Overview

This product is an article. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals.

In case of rupture:
Corrosive to eyes
Corrosive to skin
Harmful if swallowed

Appearance Black

Physical State Solid.

Odor Practically odorless

OSHA Regulatory Status

This product is an article which contains a sealed battery and as such does not require an MSDS per the OSHA Hazard Communication Standard.

Potential Health Effects

Principle Routes of Exposure

Eye contact. Skin contact. Ingestion.

Acute Toxicity

Eyes

In case of rupture: Corrosive to eyes.

Skin

In case of rupture: Corrosive to skin.

Inhalation

In case of rupture: Harmful by inhalation. Corrosive to nose, throat and respiratory tract

Ingestion

Harmful if swallowed. In case of rupture: Can burn mouth, throat, and stomach.

Chronic Effects

No known effect based on information supplied.

Aggravated Medical Conditions

None known.

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Supplier Trade Secret	Proprietary	30-60
Supplier Trade Secret	Proprietary	5-10
Supplier Trade Secret	Proprietary	1 - 5
Supplier Trade Secret	Proprietary	1 - 5

4. FIRST AID MEASURES

General Advice	This is a battery. In case of rupture:
Eye Contact	In case of contact with substance, immediately flush eyes with running water for at least 30 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with soap and plenty of water for at least 30 minutes while removing all contaminated clothing and shoes. Immediate medical attention is required.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. If breathing is irregular or stopped, administer artificial respiration. Consult a physician.
Ingestion	Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Rinse mouth. Drink plenty of water. Never give anything by mouth to an unconscious person.
Notes to Physician	Treat symptomatically.
Protection of First-aiders	Use personal protective equipment.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Flash Point	Not determined.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous Combustion Products	Hazardous metal fumes and oxides. Carbon oxides.
Explosion Data	
Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	No.
Specific Hazards Arising from the Chemical	Sealed containers may rupture when heated

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Health Hazard 0 Flammability 0 Stability 0 Physical and Chemical Hazards -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Avoid contact with skin, eyes and clothing.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8. Prevent entry into waterways, sewers, basements or confined areas.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Use personal protective equipment. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling	In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing.
Storage	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Supplier Trade Secret	TWA: 0.2 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Supplier Trade Secret	STEL: 2 mg/m ³ fume TWA: 1 mg/m ³ fume	TWA: 1 mg/m ³ fume (vacated) TWA: 1 mg/m ³ fume (vacated) STEL: 2 mg/m ³ fume	IDLH: 50 mg/m ³ fume TWA: 1 mg/m ³ fume STEL: 2 mg/m ³ fume
Supplier Trade Secret	STEL: 20 mg/m ³ fume TWA: 10 mg/m ³ fume	(vacated) TWA: 10 mg/m ³ (vacated) STEL: 20 mg/m ³	TWA: 10 mg/m ³ fume STEL: 20 mg/m ³ fume
Supplier Trade Secret	TWA: 0.2 mg/m ³ fume	TWA: 0.1 mg/m ³ fume TWA: 1 mg/m ³ dust and mist (vacated) TWA: 0.1 mg/m ³ Cu dust, fume, mist	IDLH: 100 mg/m ³ dust, fume and mist TWA: 1 mg/m ³ dust and mist TWA: 0.1 mg/m ³ fume

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines	Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).
Engineering Measures	Showers Eyewash stations Ventilation systems
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles.
Skin and Body Protection	Protective gloves.
Respiratory Protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black.	Odor	Practically odorless.
Odor Threshold	No information available	Physical State	Solid
pH	No information available		
Flash Point	No information available.	Autoignition Temperature	No information available
Decomposition Temperature	No information available	Boiling Point/Range	No information available
Melting Point/Range	No information available		
Flammability Limits in Air	No information available	Explosion Limits	No information available
Water Solubility	Partly soluble	Solubility	No information available
Evaporation Rate	No information available	Vapor Pressure	No data available
Vapor Density	No data available	Partition Coefficient: n-octanol/water	

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	None known.
Conditions to Avoid	Heat.
Hazardous Decomposition Products	Metal oxides. Carbon oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Chronic Toxicity

Target Organ Effects Central Vascular System (CVS). Eyes. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity

The environmental impact of this product has not been fully investigated. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Supplier Trade Secret		LC50: 725 mg/L (24 h) Lepomis macrochirus LC50: 209 mg/L (96 h static) Cyprinus carpio		LC50: 202 mg/L (24 h) Daphnia magna
Supplier Trade Secret	EC50: 0.031 - 0.054 mg/L (96 h static) Pseudokirchneriella subcapitata EC50: 0.0426 - 0.0535 mg/L (72 h static) Pseudokirchneriella subcapitata	LC50: 1.25 mg/L (96 h static) Lepomis macrochirus LC50: 0.112 mg/L (96 h flow-through) Poecilia reticulata LC50: 0.8 mg/L (96 h static) Cyprinus carpio LC50: 0.3 mg/L (96 h semi-static) Cyprinus carpio LC50: 0.052 mg/L (96 h flow-through) Oncorhynchus mykiss LC50: 0.0068 - 0.0156 mg/L (96 h) Pimephales promelas LC50: 0.2 mg/L (96 h flow-through) Pimephales promelas LC50: < 0.3 mg/L (96 h static) Pimephales promelas		EC50: 0.03 mg/L (48 h Static) Daphnia magna

Chemical Name	Log Pow
Supplier Trade Secret	0

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Dispose of in accordance with local regulations

Contaminated Packaging

Dispose of in accordance with local regulations.

California Hazardous Waste Codes 181

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California EHW	California Carc	California Hazardous Waste	California Waste - Part 2
Supplier Trade Secret			Toxic Corrosive	STLC (for PBTs): 250 mg/L TTLC (for PBTs): 5000 mg/kg
Supplier Trade Secret			Toxic	STLC (for PBTs): 25 mg/L TTLC (for PBTs): 2500 mg/kg

14. TRANSPORT INFORMATION

DOT

NOT REGULATED

14. TRANSPORT INFORMATION

<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Does not comply
DSL Not determined

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Supplier Trade Secret		30-60	1.0
Supplier Trade Secret		5-10	1.0
Supplier Trade Secret		1 - 5	1.0
Supplier Trade Secret		1 - 5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Supplier Trade Secret	1000 lb	X		X
Supplier Trade Secret	5000 lb			X
Supplier Trade Secret		X	X	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Supplier Trade Secret		30-60				

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Supplier Trade Secret	1000 lb	
Supplier Trade Secret	5000 lb	
Supplier Trade Secret	5000 lb	

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Supplier Trade Secret	X	X	X		X
Supplier Trade Secret			X	X	X
Supplier Trade Secret			X		
Supplier Trade Secret	X	X	X	X	X
Supplier Trade Secret	X	X	X		X
Supplier Trade Secret	X	X	X		X

International Regulations

Mexico - Grade

No information available.

Chemical Name	Carcinogen Status	Exposure Limits
Supplier Trade Secret		Mexico: TWA 10 mg/m ³ Mexico: STEL 20 mg/m ³
Supplier Trade Secret		Mexico: TWA= 0.2 mg/m ³
Supplier Trade Secret		Mexico: TWA 2 mg/m ³
Supplier Trade Secret		Mexico: TWA= 1 mg/m ³ Mexico: TWA= 0.2 mg/m ³ Mexico: STEL= 2 mg/m ³
Supplier Trade Secret		Mexico: TWA 1 mg/m ³ Mexico: STEL 2 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Non-controlled



Chemical Name	NPRI
Supplier Trade Secret	X
Supplier Trade Secret	X
Supplier Trade Secret	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Prepared By	Product Stewardship 23 British American Blvd. Latham, NY 12110 1-800-572-6501
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General 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