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Product Safety Data Sheet

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is only provided as technical information and is referred normal use of the product in question. KOOMAX makes no warranty expressed or implied.

Section 1- Identification

● Product Name Carbon-zinc Batteries	Sizes R20, R14, R6, R03, 6F22	Date of preparation Jul. 21, 2015
● Company: Shanghai Koomax Electronics Co.,Ltd	Telephone Numbers: +86-21-33688983	
● Address: 1205,Yongsheng Plaza, No 2025,West Zhongshan Rd, Shanghai, 200235, China	Fax Numbers: +86-21-33688983	

Section 2- Ingredients

Ingredient	CAS#	(%)
Hg	7439-97-76	<0.0001
Cd	7440-43-9	<0.02
Pb	7439-92-1	<0.2
Manganese Dioxide	1313-13-9	21~27
Carbon	7782-42-5	15~17
Iron	7439-89-6	4~21
Zinc	7440-66-6	18~33
Zinc chloride	7646-85-7	6~7
Water ,paper ,plastic ,other	-	Balance

NA=Not Applicable

Section 3-Physical/Chemical Characteristics

Boiling Point (°C).	N.A.
Melting Point (°C)	N.A.
Vapor Pressure (mmHg)	N.A.
Vapor Density (Air=1).	N.A.
Density (grams/cc)	N.A.
Solubility inWater (% byWeight)	N.A.
pH	N.A.
Appearance and Odor	Geometric solid object, odorless

Section 4-Fire and Explosion Hazard Data

Flash Point	N.A.
Ignition Temp	N.A.
LEL	N.A.
UEL	N.A.
Extinguishing Media	Water, foam or dry powder.
Special Fire Fighting Procedures	N.A.
Unusual Fire and Explosion Hazards	Do not dispose of battery in fire-may explode. Do not short-circuit battery-may cause burns.

Section 5- Reactivity Data

Stable or Unstable	Stable
Incompatibility (Materials to Avoid)	N.A.
Hazardous Decomposition Products	N.A.
Hazardous Polymerization	Will not occur.
Conditions to Avoid	Avoid short-circuit.

Section 6- Health Hazard Data

Health hazard (acute and chronic)/ Toxiclogical information:

- In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.
- In contact with electrolyte can cause severe irritation and chemical burns.
- Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.

Section 7- Ecological Information

N.A.

Section 8- First Aid Measures

First aid procedures:

- If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.
- If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15)minutes, and contact a physician.
- If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

Section 9- Measures for fire extinction

- In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.
- Fire fighters should wear self-contained breathing apparatus.

Section 10- Accidental Release or Spillage

Steps to be taken in case material is released or spilled:

- Batteries that are leakage should be handled with rubber gloves.
- Avoid direct contact with electrolyte.
- Wear protective clothing and a positive pressure Self-Contained BreathingApparatus (SCBA).

Section 11- Handling and Storage

Safe handing and storage advice:

- Batteries should be handled and stored carefully to avoid short circuits.
- Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.
- Never disassemble a battery.

- Do not breathe cell vapors or touch internal material with bare hands.
- Keep batteries between -30°C and 35°C for prolong storage.

Section 12- Exposure Controls / Person Protection

Occupational Exposure Limits	N.A.
Respiratory Protection (Specify Type)	N.A.
Ventilation	N.A.
Protective Gloves	N.A.
Other Protective Clothing or Equipment	N.A.
Work / Hygienic Practices	N.A.

Section 13-Disposal Method

Dispose of batteries according to government regulations.

Section 14-Transportation Information

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), InternationalAir Transport Association (IATA) and International Maritime.Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is special provision 130 which states: "Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). IATA DGR 56th edition Special ProvisionA123(revision date: year 2015) stipulates that such batteries must be packed in inner packagings in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits.

Section 15-Regulatory Information

Special requirement be according to the local regulations.

Section 16-Other Information

- The data in this Material Safety Data Sheet relates only to the specific material designated herein.
- Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.
- If you want further information, please contact KOOMAX sales representative.