Product Name: Klein Non-Contact Voltage Tester (NCVT-1)

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Material Safety Data Sheet

Model Name.: Zinc Dry Battery(Manganese Dry Battery)

Document Number: MSDS_Zinc Dry Battery Revision: 05

Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

Identity (As Used on Label and List): Carbon Zinc Dry Battery - R03, R6P, R14P, R20P, 6F22 (Manganese Dry Battery)

Section I

Supplier's Name: Maxell Asia Ltd.	Emergency Telephone Number: 852-2730-9243
Address (Number, Street, City, State and ZIP Code): 506, World Commerce Centre, Harbour City,	Telephone Number for Information: 852-2735-6250
Harbour City, Phase 1	Date Prepared: 9-Feb-09
Canton Road, Kowloon, Hong Kong	Signature of Prepared (optional)

Section II - Hazardous Ingredients/Identity Information

Hazardous Components:

Description:	Approximate % of total weight
Mercury (Hg)	< 0.0001 wt%
Cadmium (Cd)	< 0.001wt%
Lead (Pb)	< 0.2 wt%

Section III - Physical / Chemical Characteristics

Boiling Point: N.A.	Specific Gravity (H2O = 1): N.A.
Vapor Pressure (mm Hg): N.A.	Melting Point: N.A.
Vapor Density (AIR=1): N.A.	Evaporation Rate (Butyl Acetate): N.A.

Solubility in Water: N.A.

Appearance and Odor: Cylindrical Shape , odorless

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Ignition Temp.	Flammable Limits	LEL	UEL
N.A.	N.A.	N.A.	N.A.	N.A.

Extinguishing Media: N.A

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

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Section V - Reactivity Data

Stability			Conditions to Avoid
	Unstable		
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition of Byproducts

Hazardous Polymerization			Conditions to Avoid
	May Occur		
	Will Not Occur	X	

Section VI - Health Hazard Data

Route(s) of Entry	Inhalation?	Skin?	Ingestion
	N.A.	N.A.	N.A.

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 VII - First Aid Measures

First Aid Procedures

If electrolyte leakage occurs and makes contact with skins, wash 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 VIII - Accidental Release of Spillage

Step 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 Breathing Apparatus (SCBA).

Section IX - Handling and Storage

Safe handling 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℃ and 35℃ for prolong storage.

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Section X - Exposure Controls / Person Protection

Occupational Exposure Limits :		
	LTEP	STEP
	N.A.	N.A.
Respiratory Protection (Specify Type)		
	N.A.	
Ventilation	Local Exhausts	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.
Protective Gloves		Eye Protection
	N.A.	N.A.
Other Protective Clothing or Equipment		
	N.A.	
Work / Hygienic Practices		
	N.A.	

Section XI - Ecological Information

N.A.

Section XII - Disposal Method

Dispose of batteries according to government regulations

Section XIII - Transportation Information

Maxell batteries are considered to be "Dry cell" batteries and are unregulated for purpose of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air 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). The only requirement for shipping these batteries by ICAO and IATA is Special Provision A123 which states: " An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation." The international Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says : Batteries, dry , containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Example of such batteries are : alkali-manganese, zinc carbon, nickel metal hydride and nickel-cadmium batteries.

Non-dangerous goods.

Such battery have been packed in inner packaging in such a manner as to effectively prevent short circuit and movement that could lead to short-circuit.

Section XIV - Regulation Information

Special requirement be according to the local regulatories

Section XV - Other information

The data in this Material Safety Data Sheet relates only to the specific material designated herein

Section XVI - Measure 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.