

## MATERIAL SAFETY DATA SHEET

### 1. Product and Company Identification

61833 61834 61835 61836 61837 64247 64248 64249 64250 64251  
AAA H/D ALKALINE BATTERY

APPLICATIONS: Various

SUPPLIER: Draper Tools Ltd, Hursley Road, Chandlers Ford, Eastleigh, Hampshire, SO53 1YF

Draper Helpline: +44 (0) 2380 494344

### 2. Hazards identifications

General advice: The common known rules for handling of chemicals should be obeyed. These chemicals are contained in a sealed steel can. For consumer use, adequate hazard warnings are printed on both the package and the battery . Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically or electrically abused. Concentrated potassium hydroxide contained is caustic. Anticipated potential leakage of the electrolyte is 2-20 ml, depending on battery size. Do not eat and drink batteries. Keep batteries away from small children.

Physical-Chemical Hazards: This preparation is not classified as dangerous according to the criteria of directive 99/45/EEC.

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

Hazards to environment: N.A..

### 3. Composition /Information on ingredients

MATERIALS	CAS NO.	APPROXIMATE PERCENT OF TOTAL WEIGHT(%)					
		LR20	LR14	3LR12	LR6	LR03	6LR61
ZINC POWDER	7440-66-6	17.85	17.59	15.35	16.80	14.57	15.85
MANGANESE DIOXIDE	1313-13-9	43.95	42.25	39.14	41.34	38.53	37.15
GRAPHITE	7782-42-5	3.65	3.35	3.15	2.90	2.70	3.30
STEEL(Fe)	7439-89-6	15.95	17.95	17.24	18.63	23.28	24.85
BRASS	7440-50-8	0.88	1.45	1.05	1.83	3.79	3.75
PLASTIC	32131-17-2	1.35	1.65	9.11	1.13	1.12	1.15
PAPER	---	0.68	0.72	0.54	0.67	0.82	1.25
POTASSIUM HYDROXID	1310-58-3	5.18	4.85	4.70	5.68	5.26	5.65
WATER	7732-18-5	9.25	9.25	8.83	9.96	9.22	5.85
ZINC OXIDE	1314-13-2	0.57	0.50	0.31	0.42	0.39	0.45
MERCURY	7439-97-6	<1ppm	<1ppm	<1ppm	<1ppm	<1ppm	<1ppm
CADMIUM	7440-43-9	<10ppm	<10ppm	<10ppm	<10ppm	<10ppm	<10ppm
LEAD	7439-92-1	<20ppm	<20ppm	<20ppm	<20ppm	<20ppm	<20ppm
OTHER	---	0.69	0.44	0.58	0.63	0.32	0.75

### 4. First-aid measures:

Inhalation: In case of excessive in halation due to leaking batteries remove to fresh air. Obtain medial advice.

Skin Contact: If exposed to a leaking battery, remove contaminated clothing. Wash exposed areas with

plenty of water and soap. IF irritation occurs, consult a physician.

Eye contact: Not anticipated due to size of batteries. Choking may occur with the smaller size batteries. If exposed to a leaking battery, rinse mouth and surrounding areas with running water for at least 15minutes. Give plenty of water to drink. Do not induce vomiting. Obtain medical advice.

## 5. Fire-fighting measures

Suitable extinguishing media: Carbon dioxide, foam, dry chemical powder.

Extinguishing media not to be used: Never use a direct water jet.

Exposure hazards from combustion products: In case of fire, carbon monoxide and other toxic organic substances will be generated. Do not inhale fumes and smoke.

Personal protective equipments: Wear full protective clothing. Use self-contained breathing apparatus.

## 6. Accidental release measures

Personal precautions: Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and in halation of vapors. Increase the ventilation. Wear protective clothing. Keep unprotected persons away.

Environmental precautions: Avoid discharge and penetration into sewerage systems, waterways, pits, and cellars.

Methods for cleaning up :Collect spilled material with an insert standard absorbent like sand or silica. Care for well-ventilated conditions. Recycle or dispose of the materials in an appropriate way.

## 7. Handling and storage

General handling: Obey the common known rules and precautions for handling with chemicals. Avoid mechanical and electrical abuse. Do not short battery or install incorrectly. Batteries may explode, pyrolyze or vent if disassembled. Crushed, recharged or exposed to high temperatures. Install batteries according to equipment instructions. Do not mix battery systems, such as alkaline and zinc-carbon. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery labels.

Storage: Store product in well-filled, appropriate coated and tightly closed containers avoiding influence of oxygen/air, light and humidity. Storage at room temperate.

## 8. Exposure controls and personal protection

Exposition/Technical measures: Atmospheric vapor concentrations must be minimized by adequate ventilation.

Protection of hands, eyes and skin: None required under normal use conditions. When handling leaking batteries, use neoprene, rubber or nitrile gloves and wear safety glasses to protect hands, eyes and skin.

General safety and hygiene measures: use only as directed.

## 9. Physical and chemical properties

Physical state: Stainless steel top battery    Colour: Contents dark and gray in colour

Odour: N.A.

Melting point: N.A.

Boiling point: N.A.

Flash point: N.A.

Explosion limit: Not available

Ignition temperature: Not available

Vapor pressure: Not available

Specific gravity: N.A.

Solubility in water: N.A.



Solubility in other solvents: N.A.  
PH valve: Not available  
Partition coefficient: Not available  
Viscosity: Not available

### 10.Stability and Reactivity

Thermal decomposition: batteries may burst and release hazardous decomposition products when exposed to fire.

Substances to avoid: Strong Oxidation agents.

Hazardous reactions: Contents incompatible with strong oxidizing agents.

Hazardous decomposition products: Thermal degradation may produce hazardous fumes of zinc and manganese; hydrogen gas; caustic vapors of potassium hydroxide and other toxic by-products

### 11.Toxicological information

Toxicity information is available on the battery ingredients noted in Section 2, but in general, N.A. to intact batteries.

Chronic health effects: N.A.

### 12.Ecological information

Not available

### 13.Disposable consideration

Product: Dispose in accordance with appropriate regulations. If in doubt, contact your local government office concerned for information. Do not incinerate, since batteries may explode at excessive temperatures.

### 14.Transport Information

Road(ADR/RID): Not regulated

Air(ICAO/IATA): Not regulated

Sea(IMDG): Not regulated

These batteries are not regulated by international agencies as hazardous materials or dangerous goods when shipped. A shipping name of "Zinc-Carbon batteries- Non hazardous" may be used on all domestic and international bills of lading.

SP304- ( i ) All batteries must be packaged in a safe and responsible manner.

( ii ) Safe packaging that prevents short circuits.

(iii) Contained in "strong outer packaging " that prevents spill age of contents/corrosive electrolytes.

LR20、LR14、3LR12、LR6、LR03 and 6LR61 are considered to be "dry cell" batteries and are not listed as dangerous goods under below regulations:

1. Batteries, dry fulfills the requirement of U.S. Department of Transportation (DOT), Special Provision 130,i.e. they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals or batteries or batteries to be packed in Such a way to prevent short circuits or generation of a dangerous quantity of heat.)"
2. International Civil Aviation Administration (ICAO) and International Air Transport Association (IATA), 56<sup>th</sup> Edition, Special Provision A123,i.e. "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a shot-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 expose terminals or batteries to be packed in such a way to prevent short circuit or generation of a dangerous quantity of heat,) is

forbidden from transportation.”

3. International Maritime Dangerous Goods Regulations (IMDG) 2012 edition does not regulate these batteries. Examples of such batteries include alkali-manganese, silver oxide, zinc carbon, nickel metal hydride and nickel-cadmium batteries.

## 15. Regulatory Information

Symbol: N/A

EC labeling: None

Risk phrases: None

Safety phrases: None

Labeling is not required because alkaline batteries are classified as “articles” under the Dangerous Preparations Directive and as such are exempt from the requirements of the Directive.

## 16. Other information

The information on this Material Safety Data Sheet (MSDS) was obtained from current and reputable sources. However, the data is provided without any warranty; expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to assume liability on loss, injury, damage, or expense resulting from improper use of this product. Any previous MSDS of this product mentioned above are hereby replaced with this new document. We urge you to make this information available as appropriate in your organization and to any others with whom you arrange to handle this product.

The batteries are considered to be “dry cell” batteries and are not listed as dangerous goods under below Regulations:

1. Batteries, dry fulfills the requirement of U.S Department of Transportation (DOT), Special Provision 130, i.e. they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals or batteries to be packed in such a way to prevent short circuits or generation of a dangerous quantity of heat.)
2. International Civil Aviation Administration (ICAO) and International Air Transport Association (IATA), Special Provision A123, i.e. “An electrical battery or battery powered device having the potential of dangerous evolution 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 or batteries to be packed in such a way to prevent short circuits or generations of a dangerous quantity of heat.) is forbidden from transportation.”
3. International Maritime Dangerous Goods Regulations (IMDG) 2010 edition does not regulate these Batteries.
4. Each battery type must have their own special provision to comply as exemption as non dg. Pls check and update msds section 16 properly.  
There should be a special provision no#(3 digit code) stste can be comply in IMDG to get battery exempt as non dg.
5. The consignment is not classified as dangerous under the current edition of the IATA Dangerous Goods Regulations (edition 56<sup>th</sup>) with complying to the special provision A123.
6. Dry battery should meet IMDG CODE SP304.