SAFETY DATA SHEET

PRIMARY BATTERIES AS2/AS3/AS6/AS8/ AS10

Infosafe No.: LQ83F
ISSUED Date: 11/07/2017
Issued by: Reino International Pty Ltd
(Trading as Duncan Solutions)

1. IDENTIFICATION

GHS Product Identifier
PRIMARY BATTERIES AS2/AS3/AS6/AS8/AS10

Company Name
Reino International Pty Ltd (Trading as Duncan Solutions)

Address
15/39 Herbert St St Leonards
NSW 2065 Australia

Telephone/Fax Number
Tel: 02 9432 0500
Fax: 02 9432 0501

Emergency phone number
0401987498

Emergency Contact Name
Michael Almond

Recommended use of the chemical and restrictions on use
Battery for parking meters.

Other Names

Name	Product Code
AIR ALKALINE BATTERIES	

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Other Information
Incorrect handling of the batteries may lead to an accidental release of liquid. Overheating or explosion and cause injury to people or damage to equipment. Especially if contact is made with the escaping liquid, which can cause injuries such as loss of sight.

Improper use of batteries may result in the following risks:
- Contact with corrosive substances (leakage of electrolyte)
- Splashes and projections (sudden mechanical failure of the battery)

Each battery is made up of a plastic container that contains a number of chemical products and materials which might be potentially dangerous in the event of accidental release. The batteries have aeration holes that allow oxygen to enter in order to regenerate the manganese.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Zinc	7440-66-6	25-50 %
Manganese Dioxide	1313-13-9	5-20 %
Potassium Hydroxide	1310-58-3	8-15 %
Ingredients determined not to be hazardous		Balance

4. FIRST-AID MEASURES

Inhalation
Not typically required, when used as intended.
In the event that the battery suffers a leak, observe the following instructions: remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion
Not typically required, when used as intended.
In the event that the battery suffers a leak, observe the following instructions: Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin
Not typically required, when used as intended.
In the event that the battery suffers a leak, observe the following instructions: Remove all contaminated clothing immediately. Wash gently and thoroughly with water and non-abrasive soap for 15 minutes. Ensure contaminated clothing is washed before re-use or discard. Seek immediate medical attention.

Eye contact
Not typically required, when used as intended.
In the event that the battery suffers a leak, observe the following instructions: If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.

First Aid Facilities
Eyewash and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

Other Information
For advice, contact a Poisons Information Centre (Phone eg Australia 131 126).

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including metal oxides, carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific Hazards Arising From The Chemical
The product is not flammable.

Decomposition Temperature
Not available

Precautions in connection with Fire
Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Wear appropriate personal protective equipment and clothing to prevent exposure. Collect the material and place into a suitable labelled container. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

Under exceptional circumstances it is possible for liquid to escape through the aeration holes. Avoid direct contact with the eyes, the skin or clothing and make use of the personal protective equipment.

Gather up batteries and remains of batteries and deposit them in a watertight non-metallic container.

7. HANDLING AND STORAGE

Precautions for Safe Handling
- Keep batteries out of children's reach.
- Install the batteries correctly, respecting the polarity (+ and -).
- All batteries that are used simultaneously in the same appliance must be replaced at the same time in or der to ensure that all of the batteries in the appliance share the same characteristics.
- Do not mix different types or makes of batteries.
- Avoid subjecting the battery to electrical or mechanical abuse.
- Do not attempt to recharge the batteries by heating them or using any other method.
- Do not throw batteries into a fire or incinerate.
- Do not expose batteries to high temperatures.
- Avoid short-circuiting the batteries.
- Do not recharge primary batteries.
- Do not over-discharge the batteries.
- Remove the batteries from the appliance when they are dead.
- Do not solder the batteries.
- Always remove the batteries if the appliance is not going to be used for prolonged periods.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area. Elevated temperatures can result in shortened battery life. Maximum weight per pallet: 100 kg.
Product is non-stackable.
Once discharged, store the batteries so that the aeration holes are at the top, facing upward.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
Each battery is made up of a plastic container that contains a number of chemical products and materials which might be potentially dangerous in the event of accidental release.

Manganese, dust & compounds (as Mn)
TWA: 1 mg/m³

Potassium hyroxide
2 mg/m³ (Peak limitation)

Biological Limit Values
No biological limits allocated.

Appropriate Engineering Controls
Not typically required, however in the event of breaking the battery and release of materials observe the following: Provide sufficient ventilation to keep airborne levels as low as possible. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a local exhaust ventilation system is required.

Respiratory Protection
Not typically required, however in the event of breaking the battery and release of materials observe the following: If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable mist filter should be used. Reference should be made to Australian/ New Zealand Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/ NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances

Eye Protection
Not typically required, however in the event of breaking the battery and release of materials observe the following: Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/ New Zealand Standard AS/ NZS 1337 - Eye Protectors for Industrial Applications

Hand Protection
Not typically required, however in the event of breaking the battery and release of materials observe the following: Wear gloves of impervious material such as rubber, neoprene. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection
Not typically required, however in the event of breaking the battery and release of materials observe the following: Suitable protective work wear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Article - Battery	**Appearance**	Cylindrical or parallelepiped plastic boxes
Colour	Not available	**Odour**	Basic
Decomposition Temperature	Not available	**Melting Point**	MnO2 breaks down at 553°C Zn breaks down at 420°C KOH breaks down at -35°C
Freezing Point	Not available	**Boiling Point**	Not applicable
Solubility in Water	Completely (KOH)	**Specific Gravity**	Not available
pH	Under normal conditions: not applicable Internal product: pH 14	**Vapour Pressure**	Not applicable
Vapour Density (Air=1)	Not applicable	**Evaporation Rate**	Not applicable
Odour Threshold	Not available	**Viscosity**	Not available
Partition Coefficient: n-octanol/water	Not applicable	**Density**	3-5g/cm³
Flash Point	Not applicable	**Flammability**	Non-flammable
Auto-Ignition Temperature	Not available	**Explosion Limit - Upper**	Not applicable
Explosion Limit - Lower	Not applicable		

10. STABILITY AND REACTIVITY

Chemical Stability
Stable under normal conditions of storage and handling.

Reactivity and Stability
Not available

Conditions to Avoid
Avoid short-circuiting. To achieve this, it is not advisable to mix batteries, bring the batteries into contact with jewellery, metal tables or any type of electrical conductor. Avoid crushing, perforating or dismantling.

Incompatible materials
Not available

Hazardous Decomposition Products
No decomposition if stored and applied as directed.

Possibility of hazardous reactions
Not available

Hazardous Polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
No toxicity data available for this material.

Ingestion
None expected, when used as intended.
In the event that the battery suffers a leak, Ingestion will cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.

Inhalation
None expected, when used as intended. In the event that the battery suffers a leak, Inhalation of mist or vapour will result in respiratory irritation and possible harmful corrosive effects including burns, lesions of the nasal septum, pulmonary edema, and scarring of tissue.

Skin
None expected, when used as intended. In the event that the battery suffers a leak, Causes burns. Corrosive to the skin. Skin contact can cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.

Eye
None expected, when used as intended. In the event that the battery suffers a leak, Causes eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and possible burns, necrosis, permanent damage and blindness.

Respiratory sensitisation
Not expected to be a respiratory sensitiser.

Skin Sensitisation
Not expected to be a skin sensitiser.

Germ cell mutagenicity
Not considered to be a mutagenic hazard.

Carcinogenicity
Not considered to be a carcinogenic hazard.

Reproductive Toxicity
Not considered to be toxic to reproduction.

STOT-single exposure
Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure
Not expected to cause toxicity to a specific target organ.

Aspiration Hazard
Not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No ecological data are available for this material.

Persistence and degradability
Batteries left outdoors may begin to leak through the aeration holes.

Mobility
The density of the batteries is greater than water and they are not soluble.

Bioaccumulative Potential
None known if used/disposed of correctly.

Other Adverse Effects
None known if used/disposed of correctly.

Environmental Protection
Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations
The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information
Road and Rail Transport (ADG Code):
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition).

Marine Transport (IMO/IMDG):
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Air Transport (ICAO/IATA):
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

U.N. Number
None Allocated

UN proper shipping name
None Allocated

Transport hazard class(es)
None Allocated

Special Precautions for User
Not available

IMDG Marine pollutant
No

Transport in Bulk
Not available

15. REGULATORY INFORMATION

Regulatory information
Not classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule
Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of SDS
SDS Created: July 2017

References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Workplace exposure standards for airborne contaminants.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of classification and labelling of chemicals.

END OF SDS