

**MATERIAL SAFETY DATA SHEET – CARBON ZINC BATTERIES**

Technote 38

Rev 04

22 April 2015

COPYRIGHT© 2004-2010 ARLEC AUSTRALIA Pty Ltd, Melbourne

All rights are reserved. No part of this document is to be distributed, reproduced or copied in any form without written permission from Arlec AUSTRALIA Pty Ltd.

The information contained in the Material Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

**STATEMENT OF HAZARDOUS NATURE**

Not classified as hazardous according to Worksafe Australia criteria.

**COMPANY DETAILS**

Manufactured for:

Arlec Australia Pty Ltd (ACN 009 322 105)  
Building 3, 31-41 Joseph St  
Blackburn North Vic 3130  
PO Box 1065  
Blackburn North Vic 3130

**IDENTIFICATION****Product Name:** Carbon Zinc Batteries, Heavy Duty, Extra Heavy Duty**Manufacturer's Product Code:**

BH series, BE series, BAT-6V

**UN Number:** None allocated**Dangerous Goods Class and Subsidiary Risk:** None**Hazchem Code:** None**Poisons Schedule Number:** None**Use:** Energy source**Physical Description/Properties****Appearance:** Various Standard Battery Sizes. Contents dark in colour.**Boiling Point/Melting Point:** Not available **Flashpoint:** Not available**Vapour Pressure:** Not available **Flammability Limits:** Not available**Specific Gravity:** Not available **Solubility in Water:** Not applicable**Other Properties:****Ingredients\*:**

<b>Chemical Name:</b>	<b>CAS Number:</b>	<b>% :</b>
Manganese Dioxide	1313-13-9	15-31
Zinc	7440-66-6	7-42
Acetylene Black	1333-86-4	3-7
Ammonium Chloride	12125-02-9	0-10
Zinc Chloride	7646-85-7	2-10

## HEALTH HAZARD INFORMATION

These chemicals and metals are contained in a sealed can. For consumer use, adequate hazard warnings are included on both the package and on the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused.

### **First Aid:**

**Swallowed:** Not anticipated due to size of batteries; choking may occur with the smaller AAA battery. Irritation, including caustic burns/injury, may occur following exposure to a leaking battery. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

If battery or open battery is ingested, do not induce vomiting or give food or drink. Seek medical attention immediately.

**Eye:** Contents of an open battery can cause severe irritation and chemical burns. Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

**Skin:** Contents of an open battery can cause skin irritation and/or chemical burns. Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or irritation persists, seek medical attention.

**Inhaled:** Contents of an open battery can cause respiratory irritation. Provide fresh air and seek medical attention.

**Chronic:** Not applicable to intact batteries.

**Note:** Acetylene Black is listed as a possible carcinogen by International Agency for Research on Cancer (IARC).

**First Aid Facilities:** Not applicable for normal consumer use. For warehouse/storage facilities have an eyewash and safety shower available in case batteries leak or rupture.

## **PRECAUTIONS FOR USE**

**Exposure Standards:** 8-Hour TWA's:

Manganese Dioxide (as Mn) - 1 mg/m<sup>3</sup> (dust and compounds, Australia); 5 mg/m<sup>3</sup> (Ceiling) (OSHA); 0.2 mg/m<sup>3</sup> (ACGIH)  
Acetylene Black – 3.5 mg/m<sup>3</sup> (OSHA); 3.5 mg/m<sup>3</sup> (Ceiling) (ACGIH) (As Carbon Black)  
Ammonium Chloride – Not Established (OSHA); 10 mg/m<sup>3</sup> (Fume)  
Zinc Chloride - 1 mg/m<sup>3</sup> (OSHA); 1 mg/m<sup>3</sup> (Ceiling) (ACGIH) (Fume)

These levels are not anticipated under normal consumer use conditions.

**Engineering Controls:** General ventilation under normal use conditions.

**Personal Protection:** None under normal use conditions. Wear safety glasses and neoprene, rubber or latex gloves when handling leaking batteries.

**Flammability:** Not applicable

## **SAFE HANDLING INFORMATION**

### **Storage:**

Store at room temperature. Elevated temperatures can result in shortened battery life. Avoid mechanical or electrical abuse. Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and zinc carbon, in the same equipment. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery label.

### **Mechanical Containment:**

If potting or sealing the battery in an airtight or watertight container is required, consult your manufacturer representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

### **Transport:**

Carbon Zinc batteries are subject to IATA Special Provision A123 when shipped as airfreight.

Carbon Zinc batteries are not subject to hazardous or dangerous goods restrictions when shipped by road or rail.

### **Handling:**

Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuits will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewellery, metal covered tables or metal belts used for assembly of batteries in devices.

If soldering or welding to the battery is required, consult your manufacturer representative for proper precautions to prevent seal damage or short circuit.

**Charging:**

This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

**Disposal:**

Individual consumers may dispose of spent (used) batteries with household trash. Appropriate disposal technologies include incineration and landfilling.

**OTHER INFORMATION:**

**CONTACT POINT:** Australian Poisons Information Centre

24 hour service: -13 11 26

Police or Fire Brigade: -000 (exchange): -1100

New Zealand Poisons Information Centre

Dunedin: -(03)479 1200 (Normal hours)

-(03)474 0999 (Emergency)