SDS SHEET 0052660

Safety Data Sheet | |
Date of Issue: 02 FEB 10 |Revision Date: 11 MAR 15 |Revision Number: D
Imperial Supplies Part Number: 0052660

SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form:
Product Name: 9-Volt Lithium Manganese Dioxide Batteries (TFSi Style)
CAS No:
Synonyms:

1.2. Intended Use of the Product
Use of the substance/mixture:

1.3. Name, Address, and Telephone of the Responsible Party
Company
Ultralife Corporation
2000 Technology Parkway
Newark, NY 14513
Phone: 800-332-5000

1.4. Emergency Telephone Number
Emergency number |ChemTrec 800-424-9300 (US), 703-527-3887 (International)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
Classification (GHS-US)
This Ultralife battery product meets the definition of an article. Under the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), "Articles" as defined in the Hazard Communication Standard (29 CFR 1910.1200) of the Occupational Safety and

Health Administration of the United States of America, or by similar definition, are outside the scope of the system. [Rev. 2 (2007) Part 1.3.2.1.1].

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)	
Signal Word (GHS-US)	
Hazard Statements (GHS-US)	Do not open or disassemble. Do not expose to fire or open flame. Do not mix with batteries of varying sizes, chemistries or types. Do not puncture, deform, incinerate or heat above 60Â°C (140Â°F).
Precautionary Statements (GHS-US)	

2.3. Other Hazards

Other Hazards Not Contributing to the Classification:

2.4. Unknown Acute Toxicity (GHS-US)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)

Full text of H-phrases: See Section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Manganese Dioxide, MnO2	1313-13-9	50-60	
Lithium Metal, Li	7439-93-2	2-6	
Propylene Carbonate, C4H6O3	108-32-7	1-5	
Ethylene Carbonate, C3H4O3	96-49-1	1-5	
Ethyl Methyl Carbonate,C4H8O3	623-53-0	1-5	
Bis (Trifluoromethane) Sulfonimide Lithium (LiTFSi)	90076-65-6	1-5	

Non-hazardous components	NA	25-35

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General:
First-aid Measures After Inhalation: Avoid inhaling any vented gases. Remove to fresh air immediately. If breathing is difficult, seek emergency medical attention.
First-aid Measures After Skin Contact: Exposure to materials from a ruptured or otherwise damaged cell or battery may cause skin irritation. Flush immediately with water and wash affected area with soap and water.
First-aid Measures After Eye Contact: Exposure to materials from a ruptured or otherwise damaged cell or battery may cause eye irritation. Flush immediately with copious amounts of water for at least 15 minutes; consult a physician immediately.
First-aid Measures After Ingestion: Consult a physician or local poison control center immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries:
Symptoms/Injuries After Inhalation:
Symptoms/Injuries After Skin Contact:
Symptoms/Injuries After Eye Contact:
Symptoms/Injuries After Ingestion:
Chronic Symptoms:

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Copious amounts of cold water or water-based foam may be used to cool burning cells or batteries. Do not use warm or hot water. A carbon dioxide (CO_2) extinguisher is also effective. For fires involving exposed, raw lithium metal (characterized by deep red flames), use only metal (Class D) fire extinguishers.
Unsuitable Extinguishing Media:

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Cells or batteries that are damaged, opened or exposed to excessive heat/fire may flame or leak potentially hazardous organic vapors.
Explosion Hazard:
Reactivity:

5.3. Advice for Firefighters

Precautionary Measures Fire:
Firefighting Instructions: Use a positive pressure self-contained breathing apparatus (SCBA) if cells or batteries are involved in a fire. Full fire fighting protective clothing is necessary. During water application, caution is advised as burning pieces of flammable particles may be ejected from the fire.
Protection During Firefighting:

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: In the event a cell or battery is crushed; releasing its contents, rubber gloves must be used to handle all battery components. Avoid inhalation of any vapors that may be emitted. Damaged batteries that are not hot or burning should be placed in a sealed plastic bag or container.

6.1.1. For Non-emergency Personnel
Protective Equipment:
Emergency Procedures:

6.1.2. For Emergency Responders
Protective Equipment:
Emergency Procedures:

6.2. Environmental Precautions

6.3. Methods and Material for Containment and Cleaning Up
For Containment:
Methods for Cleaning Up:

6.4. Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Additional Hazards When Processed: Batteries are not designed to be recharged. Charging a primary cell or battery may result in electrolyte leakage and/or cause the cell or battery to flame. Never disassemble a battery or bypass any safety device. More than a momentary short circuit will generally reduce the battery service life. Batteries with fuses will no longer be functional after being shorted. Extended short-circuiting creates high temperatures in the cell. High temperatures can cause burns in skin or cause the cell to flame. Avoid reversing battery polarity within the battery assembly. To do so may cause cell to flame or to leak.
Hygiene Measures:

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures:
Storage Conditions: Batteries should be separated from other materials and stored in a non-combustible, well ventilated structure with sufficient clearance between walls and battery stacks. Do not place batteries near heating equipment, nor expose to direct sunlight for long periods. Do not store batteries above 60Â°C (140Â°F) or below -40Â°C (-40Â°F). Store batteries in a cool (below 25Â°C (77Â°F)), dry area that is subject to little temperature change. Elevated temperatures can result in reduced battery service life. Battery exposure to temperatures in excess of 130Â°C (266Â°F) will result in the battery venting flammable liquid and gases. Do not store batteries in a manner that allows terminals to short circuit.

7.3. Specific End Use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

8.2. Exposure Controls

Appropriate Engineering Controls	Under conditions of normal use, batteries do not emit hazardous or regulated substances. No engineering controls are required for handling batteries that have not been damaged.
Personal Protective Equipment	Personal protective equipment for damaged batteries should include chemical resistant gloves and safety glasses. In the event of a fire, SCBA should be worn along with thermally protective outer garments.
Materials for Protective Clothing	
Hand Protection	
Eye Protection	
Skin and Body Protection	
Respiratory Protection	
Thermal Hazard Protection	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	
Appearance	Rectangular pack
Odor	None
Odor Threshold	Not Applicable
pH	Not Applicable
Relative Evaporation Rate (butylacetate=1)	Not Applicable
Melting Point	Not Available
Freezing Point	
Boiling Point	Not Available
Flash Point	Not Applicable
Auto-ignition Temperature	Not Available
Decomposition Temperature	Not Available
Flammability (solid, gas)	Not Applicable
Vapor Pressure	Not Applicable
Relative Vapor Density at 20 Â°C	Not Applicable
Relative Density	Not Available
Specific Gravity	
Solubility	Not Applicable
Partition coefficient: n-octanol/water	Not Applicable
Viscosity	Not Applicable
Lower Flammable Limit	Not Applicable
Upper Flammable Limit	Not Applicable

9.2. Other Information

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical Stability

Stable.

10.3 Possibility of Hazardous Reactions
Hazardous Polymerization: Will Not Occur.

10.4 Conditions to Avoid
It is not recommended that this product be stored above 60Â°C (140Â°F).

10.5 Incompatible Materials

10.6 Hazardous Decomposition Products
Carbon Monoxide (CO), Hydrogen Fluoride (HF) and other VOC's.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects
Acute Toxicity: No toxicological impacts are expected under normal use conditions. The electrolytes contained in this cell or battery can irritate eyes with any contact. Prolonged contact of electrolytes with lung tissue, skin or mucous membranes may cause irritation. Detailed information regarding sensitization, carcinogenicity, mutagenicity or reproductive toxicity related to internal cell or battery components has not been included in this document.
Skin Corrosion/Irritation:
Serious Eye Damage/Irritation:
Respiratory or Skin Sensitization:
Germ Cell Mutagenicity:
Carcinogenicity:
Reproductive Toxicity:
Specific Target Organ Toxicity (Single Exposure):
Specific Target Organ Toxicity (Repeated Exposure):
Aspiration Hazard:
Symptoms/Injuries After Inhalation:
Symptoms/Injuries After Skin Contact:
Symptoms/Injuries After Eye Contact:
Symptoms/Injuries After Ingestion:
Chronic Symptoms:

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
No ecological impacts expected under normal use conditions. Detailed information regarding the ecological impact of internal cell or battery components has not been included in this document.

12.2. Persistence and Degradability

12.3. Bioaccumulative Potential

12.4. Mobility in Soil

12.5. Other Adverse Effects

SECTION 13: DISPOSAL CONSIDERATIONS
13.1. Waste treatment methods
Waste Disposal Recommendations: Do not dispose in fire. Battery disposal regulations vary on national, state/provincial and local bases.
Additional Information: Disposal must be conducted in accordance with the applicable regulations. These batteries contain recyclable materials and recycling is encouraged over disposal.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name	Lithium metal batteries, packed with equipment	
Hazard Class	9	<PICTOGRAM PHRASE>
Identification Number	UN 3091	
Label Codes		
ERG Number		

14.2 In Accordance with IMDG

Proper Shipping Name	Lithium metal batteries, contained in equipment	
Hazard Class	9	
Identification Number	UN 3091	
Label Codes		<PICTOGRAM PHRASE>
ntification Of The		
Substance/m		
EmS-No. (Fire)		
EmS-No. (Spillage)		

14.3 In Accordance with IATA

Proper Shipping Name	Lithium metal batteries	
Identification Number	UN 3090	<PICTOGRAM PHRASE>
Hazard Class	9	
Label Codes		
ntification Of The		
Substance/m		
ERG Code (IATA)		

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations
<COMPONENT>
Hazard Communication Standard (29 CFR 1910.1200): Article.
CERCLA SECTION 304 Hazardous Substances: NA.
EPCRA SECTION 302 Extremely Hazardous Substance: NA.
EPCRA SECTION 313 Toxic Release Inventory: NA.
EPCRA SECTION 312: NA.
SARA Section 311/312 Hazard Classes |
Toxic Substances Control Act (TSCA) |Components Listed on US Toxic Substances
|Control Act (TSCA): Yes.

15.2 US State Regulations
<COMPONENT>
California Prop 65 Classification: None.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date	11 MAR 15
Other	This document has been prepared in accordance with the SDS

Information	requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
GHS Full Text Phrases:	

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Grainger disclaimer.