

1. IDENTIFICATION REVISION DATE: 5/15/2015

PRODUCT IDENTITY: LITHIUM ION
BATTERY LI TEL 48-170C

Product Use: Electric Storage Battery
Manufacturer/Supplier: C&D Technologies, Inc.

Address:
C&D Technologies, Inc.
1400 Union Meeting Road
Blue Bell, PA 19422-0858

Web Sites: www.cdtechno.com

North America 24 Hour Emergency Telephone: (CHEM TEL) 1-800-255-3924
International 24 Hour Emergency Telephone: (CHEM TEL) 1-813-248-0585
C&D Technologies Inc. Telephone:
215-619-2700

## 2. GHS HAZARDS IDENTIFICATION

Health	Environmental	Physical	
Sealed battery – not a health hazard	Sealed battery – not an environmental hazard.	Sealed battery – no physical hazards.	

# **GHS Label:**

Sealed battery – not a health hazard. Sealed battery – not a health hazard.	Health	Environmental	Physical
Sealed battery – not a health hazard. Sealed battery – not a health hazard.			
	Hazard Statements	Precautionary Statements	
If exposure to internal materials within the   If exposure to internal materials within the cell due to	Sealed battery – not a health hazard.	Sealed battery – not a hea	alth hazard.
	If exposure to internal materials within the	If exposure to internal ma	aterials within the cell due to
cell due to damage to the outer casing, the damage to the outer casing, the following precautions are	cell due to damage to the outer casing, the	damage to the outer casin	ng, the following precautions are
following actions are recommended: recommended:	following actions are recommended:	recommended:	
Inhalation: leave area immediately and seek Wear protective gloves/protective clothing, eye	Inhalation: leave area immediately and seek	Wear protective gloves/pro	otective clothing, eye
medical attention. protection/face protection when handling any internal	medical attention.	protection/face protection	when handling any internal
Eye contact: rinse eyes with water for at least 15 components.	Eye contact: rinse eyes with water for at least 15	components.	
minutes and seek medical attention. Causes skin, eye and respiratory tract irritation.	minutes and seek medical attention.	Causes skin, eye and respin	ratory tract irritation.
Skin contact: wash area thoroughly with soap	Skin contact: wash area thoroughly with soap		
and water and seek medical attention.	and water and seek medical attention.		
Ingestion: drink milk/water and induce vomiting;	Ingestion: drink milk/water and induce vomiting;		
seek medical attention.	seek medical attention.		



#### 3. \*COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (Chemical/Common Names):	CAS No.:	% by Wt:	
*Aluminum foil	7492-90-5	2-10	
Metal oxide	N/A	20-50	
*Polyvinylidene Flouride (PVDF)	24937-79-9	10	
*Copper foil	7440-50-8	2-10	
*Carbon	7440-44-0	10-30	
Electrolyte	N/A	10-20	
Al Laminated Film	N/A	Remainder	
SECTION 313 (40 CFR 372) LISTED TOXIC CHEMICALS ARE PRECEDED BY AN *.			

#### 4. FIRST AID MEASURES

### **INHALATION:**

Solid battery; no inhalation possible.

#### **INGESTION:**

Solid battery; no ingestion possible. .

#### **SKIN:**

Solid battery; no skin contact with internal components possible...

#### **EYES:**

Wear safety glasses with side shields.

# If exposure to internal materials within the cell due to damage to the outer casing, the following actions are recommended:

Inhalation: leave area immediately and seek medical attention.

Eye contact: rinse eyes with water for at least 15 minutes and seek medical attention. Skin contact: wash area thoroughly with soap and water and seek medical attention.

Ingestion: drink milk/water and induce vomiting; seek medical attention.

#### 5. FIRE FIGHTING MEASURES

Flash Point: Not Applicable

Flammable Limits: LEL: N/A; OEL: N/A

Extinguishing media: Class ABC or CO2. Do not use carbon dioxide directly on cells as the thermal shock

may cause cracking of the battery case.

## **Fire Fighting Procedures:**

Use positive pressure, self-contained breathing apparatus and protective clothing.



#### **Hazardous Combustion Products:**

This cell is not flammable but internal material will burn if the cell is incinerated. Combustible products include, but are not limited to, hydrogen fluoride, carbon monoxide, and carbon dioxide..

#### 6: ACCIDENTAL RELEASE MEASURES

If battery case is dismantled or damaged, use sand, earth or vermiculite to absorb any exuded material. Damaged batteries that are not hot or burning should be placed in a sealed plastic bag or container with absorbent material and disposed of per Federal, State, and Local regulations..

#### 7. HANDLING AND STORAGE

## **Handling and Storage:**

Do not open, disassemble, or crush plus or minus battery terminal with conductive materials. Do not expose the battery to extreme heat or fire. Store battery in a cool and dry place and keep at room temperature.

# 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits (mg/m<sup>3</sup>) Note: N.E. = Not Established

(	<i>)</i>					
INGREDIENTS	OSHA PEL	ACGIH	US NIOSH	Quebec PEV	Ontario OEL	EU OEL
(Chemical/Common Names):						
Aluminum foil	2 mg/m3 as	10 mg/m3 as				
	soluble salt	dust				
Carbon	2 mg/m3 as	3.5 mg/m3 as				
	dust	dust				
Copper foil	1 mg/m3 as	1 mg/m3 as				
	dust	dust				

#### **Engineering Controls (Ventilation):**

Store and handle in well-ventilated area. Keep away from heat and open flame. Store in a cool, dry place.

## **Respiratory Protection (NIOSH/MSHA approved):**

None required under normal conditions. In the event of a fire, use NIOSH or MSHA-approved respiratory protection or full face SCBA.

#### **Skin Protection:**

If battery case is damaged, use nitrile gloves when handling internal components.

# **Eye Protection:**

Safety glasses with side shields per normal handling.

### **Other Protection:**

Not required.



#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Properties Listed Below are for Electrolyte:				
Boiling Point:	N/A	Specific Gravity (H2O = 1):	N/A	
Melting Point:	N/A	Vapor Pressure (mm Hg):	N/A	
Solubility in Water:	N/A	Vapor Density (AIR $= 1$ ):	N/A	
Evaporation Rate:	N/A	% Volatile by Weight:	N/A	
(Butyl Acetate = 1)				
pH:	N/A	Flash Point:	N/A	
Appearance and Odor: Manufactured article; no apparent odor. Solid battery.				

#### 10. STABILITY AND REACTIVITY

Stability: Stable X Unstable \_\_\_\_

This product is stable under normal conditions at ambient temperature.

Conditions to Avoid: avoid exposure to heat, open flame, and corrosives. Do not puncture, crush or incinerate.

**Incompatibilities** (materials to avoid): conductive metals and organic solvents.

**Hazardous Decomposition Products:** none during normal operations.

Hazardous Polymerization: will not occur

#### 11. TOXICOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use. If the cells are opened through misuse or damage, dispose of battery immediately per regulatory requirements. Internal components of cell are irritants.

#### **Routes of Entry:**

No exposure possible during normal operations.

#### **Inhalation:**

No exposure possible during normal operations..

#### **Ingestion:**

No exposure possible during normal operations.

#### **Skin Contact:**

No exposure possible during normal operations.

# **Eye Contact:**

May cause eye irritation if exposure to internal components.



## **Effects of Overexposure - Acute:**

Not applicable.

# **Effects of Overexposure - Chronic:**

Not applicable.

# **Carcinogenicity:**

Not applicable.

## **Medical Conditions Generally Aggravated by Exposure:**

Not applicable.

# **Acute Toxicity:**

Not applicable.

#### **Additional Health Data:**

# If exposure to internal materials within the cell due to damage to the outer casing, the following actions are recommended:

Inhalation: leave area immediately and seek medical attention.

Eye contact: rinse eyes with water for at least 15 minutes and seek medical attention.

Skin contact: wash area thoroughly with soap and water and seek medical attention.

Ingestion: drink milk/water and induce vomiting; seek medical attention.

#### 12. ECOLOGICAL INFORMATION

**Environmental Fate:** Not applicable.

Environmental Toxicity: Not applicable

# 13. DISPOSAL CONSIDERATIONS (UNITED STATES)

Spent batteries: Send to secondary lead smelter for recycling.

Following local, State/Provincial, and Federal/National regulations applicable to end-of-life characteristics will be the responsibility of the end-user.

#### 14. TRANSPORT INFORMATION

UN Number UN3480

**Shipping Name** Lithium Batteries

Hazard Classification Class 9
Packing Group II

IATA/ICAO (air transportation): UN3480 or UN3481 IDMG (sea transportation): UN3480 or UN3481

Transportation within the U.S. (DOT): 49 Code of Federal Regulations

### 15. REGULATORY INFORMATION

#### **UNITED STATES:**

# EPCRA Sections 302, 304, 311 & 312

Lithium batteries do **NOT** meet the OSHA definition of an "article" (US EPA, Oct. 1998).

#### **EPCRA Section 313**

Not applicable.

#### TSCA:

TSCA Section 8b – Inventory Status: All chemicals comprising this product are either exempt or listed on the TSCA Inventory.

**RCRA:** Spent lithium Batteries are subject to streamlined handling requirements when managed in compliance with 40 CFR section 266.80 or 40 CFR part 273.

#### 16. OTHER INFORMATION

NFPA Hazard Rating:

Flammability (Red) = 0

Health (Blue) = 0

Reactivity (Yellow) = 0

MSDS Preparation/Review Date: 5/15/2015 Prepared by: W. E. Kozlowski – Director EHS

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