

# **S** *AFETY DATA SHEET*

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## *Li-Ion Rechargeable Battery 6075736*

*Number 6850720-R3*

**cascade<sup>®</sup>  
corporation**

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1-800-227-2233  
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**Model: Lithium-Ion Rechargeable Battery**  
**Number: 6075736**

Prepared by	Approved by
Steve Wittkop	Pat McKernan
Date: May 23, 2017	Date: May 23, 2017

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT IDENTIFICATION

#### Lithium-Ion/ Polymer Cell/Battery

Nominal Voltage : 3.7 V Equivalent Lithium content : ≤20Wh

Testing Period : Jan 3, 2012 to Jan 25, 2013

### MANUFACTURER

Cascade Corporation  
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## 2. COMPOSITION INFORMATION

INGREDIENTS	%	CAS NUMBER
Lithium Cobaltate	30.60%	12190-79-3
Graphite powder	15.06%	7782-42-5
Rubber	10.36%	69028-37-1
Carbon black	0.79%	1333-86-4
Styrene-butadiene rubber (SBR)	0.71%	61789-96-6
Polypropylene	1.74%	9003-07-0
Polyethylene	1.27%	9002-88-4
Lithium hexafluorophosphate	1.27%	21324-40-3
Ethylene carbonate (EC)	6.34%	96-49-1
Diethyl carbonate (DEC)	4.76%	105-58-8
Propylene carbonate (PC)	1.11%	108-32-7
Polycaprolactam (NYLON 6)	1.11%	25038-54-4
Copper	9.65%	7440-50-8
Aluminium	4.12%	7429-90-5
Nickel	1.27%	7440-02-0
Polymide Film	0.43%	58698-66-1

### **3. HAZARDS IDENTIFICATION**

#### PRIMARY ROUTES OF ENTRY

Skin contact, Skin absorption, Eye contact, Inhalation, and Ingestion : NO

#### SYMPTOMS OF EXPOSURE

Skin contact, Skin absorption, Eye contact, Inhalation. No effect under routine handling and use.

### **4. FIRST AID**

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard.

#### INGESTION

If swallowed, obtain medical attention immediately.

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

#### INHALATION

Leave area immediately and seek medical attention

#### EYE CONTACT

Rinse eyes with water for 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 MEASURE GENERAL HAZARD**

Cell is not flammable but internal organic material will burn if the cell is incinerated.

Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

#### EXTINGUISHING MEDIA

Use extinguishing media suitable for the materials that are burning

#### SPECIAL FIREFIGHTING INSTRUCTIONS

If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent

#### FIREFIGHTING EQUIPMENT

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

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## 6. ACCIDENTAL RELEASE MEASURE ON LAND

Place material into suitable containers and call local fire/police department

### IN WATER

If possible, remove from water and call local fire/police department

## 7. HANDLING AND STORAGE HANDLING

No special protective clothing required for handling individual cells.

### STORAGE

Store in a cool, dry place

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### ENGINEERING CONTROLS

Keep away from heat and open flame. Store in a cool dry place.

### PERSONAL PROTECTION

Respirator: Not required during normal operations.  
SCBA required in the event of a fire.

Eye/face protection: Not required beyond safety practices of employer

Gloves: Not required for handling of cells.

Foot protection: Steel toed shoes recommended for large container handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

State	Solid	Odor	N/A
PH	N/A	Vapor pressure	N/A
Vapor density	N/A	Boiling point	N/A
Solubility in water	Insoluble	Specific gravity	N/A
Density	N/A		N/A

## 10. STABILITY AND REACTIVITY

### REACTIVITY

None

### INCOMPATIBILITIES

None (during normal operation) Avoid exposure to heat, open flame, and corrosives.

### HAZARDOUS DECOMPOSITION PRODUCTS

None (during normal operating conditions). If cells are opened, hydrogen fluoride and carbon monoxide may be released.

### CONDITIONS TO AVOID

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

## 11. TOXCOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use.

Sensitization: No	Teratogenicity: No	Reproductive toxicity: No	Acute toxicity: No
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This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in Appendix of TCO documents and relevant international ECO requirements:

Polybromated Biphenyls	(PBB)
Polybromated Biphenyl Ethers	(PBBE)
Polybromated Biphenyl Oxides	(PBBO)
Polybromated Diphenylethers	(PBDE)
Polybromated Diphenylethers	(PBDE)
Polychlorinated Biphenyl	(PCB)
Polychlorinated Diphenylethers	(PCDE)
Tetrabromophenol A	(TBBPA)

Asbestos, Antimonytrioxide, Dioxine

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

Chlorinated Fluorohydrocarbon (FCKW)

Acrylonitrile, Styrol, Phenol, Benzol

Mercury of greater than 0.0001 wt% for alkaline battery. Mercury of greater than 0.0005 wt% for other battery.

Lithium content of greater than 0.5g/cell, 1.5g/battery Cadmium, lead, and other harmful heavy ion.

This product does not contain mercury, cadmium and lithium-ion.

Mercury content: N/A

Lithium-ion:

Cadmium content : N/A

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

## **12. ECOLOGICAL INFORMATION**

Some materials within the cell are bio-accumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

## **13. DISPOSAL CONSIDERATIONS**

CALIFORNIA REGULATED DEBRIS  
RCRA Waste Code: Non-regulated  
Dispose of according to all federal, state, and local regulations.

## **14. REGULATORY INFORMATION**

OSHA hazard communication standard (29 CFR 1910.1200)

Hazardous       Non-hazardous

## **15. TRANSPORT INFORMATION**

For the international transport of lithium batteries, they must comply with these regulations: the International Maritime Dangerous Goods (IMDG) Code by International Maritime Organization (IMO), Dangerous Goods Regulations (DGR) by International Air Transport Association (IATA) and Technical Instructions for the Safe Transport of Dangerous Goods by Air (TI) by International Civil Aviation Organization (ICAO). These regulations are based on the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.

Lithium batteries which meet the requirements of UN38.3 (UN Manual of Tests and Criteria, Part III, subsection 38.3) when transported by air and by sea should be transported according to Class 9, Packing Group 1B hazardous goods.

As the published of the UN Recommendations on the Transport of Dangerous Goods, all these regulations have added some new contents to regulate the transport of lithium ion batteries. And they should be complied since 1 January 2009.

1. For lithium ion batteries, UN ID number is 3480. For lithium ion batteries contained in equipment or lithium ion batteries packed with equipment, UN ID number is 3481.
2. The consignment should be fully described by proper shipping name and packed, marked and in proper condition.
3. For transported by a) Air: Lithium-ion Cells/Batteries shipped state of charge can not exceed 30%. Must comply with Section 1B of PI965 accordingly; For cells, the Watt-hour rating should not be more than 20Wh; For batteries, the Watt-hour rating should not be more than 100Wh. Watt- hour rating must be marked on the outside of the battery case (marked by manufacturer) and marked for "Cargo Aircraft only". b) Ground: Section II of PI 965.
4. Each consignment must be accompanied with a document such as an air waybill with an indication. The telephone number for additional information for Cascade products is 1-800-227-2233.
5. Quantity per package shall not exceed 10kg.
6. Each package must be capable of withstanding a 1.2m drop test in any orientation without damage of cells or batteries contained therein.
7. Lithium batteries which meet the requirements of A154 could be transported by air, and the batteries supplied by Cascade meet these requirements. Lithium batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport.
8. Cells and batteries must be protected so as to prevent short circuits.
9. For Lithium ion cells/batteries contained in equipment UN 3481, use Section II of PI 967, up to two spair batteries are allowed and must be equipped with an effective means of preventing accidental activation.

## **16. OTHER INFORMATION**

This information is not effective to all the batteries manufactured by Cascade. This information comes from reliable sources, but no warranty is made to the completeness and accuracy of information contained. Cascade Corporation doesn't assume responsibility for any damage or loss because of misuse of batteries. Users should grasp the correct use method and be responsible for the use of batteries.

**Do you have questions you need answered right now?**

Call your nearest Cascade Service Department.

Visit us online at [www.cascorp.com](http://www.cascorp.com)

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