Attention Volvo Parts Managers and Service Managers

There may come a time where a Customer Vehicle will require Technical Service and you will be instructed to replace and ship a defective lithium hybrid battery directly to our Supplier for Technical Evaluation.

**Note:** All Volvo Lithium-ion Hybrid Batteries will be part of our Volvo Technical Helpdesk Prior Approval Process.

The failed Hybrid battery must be shipped directly to the hybrid battery supplier LG Chem Power Inc. (LGCPI) at the address indicated below and on the shipping labels attached.

**VOLVO LITHIUM-ION HYBRID BATTERY PACK SHIPPING AND HANDLING GUIDELINES:**
Remove the replacement battery from the shipping container and follow instructions as outline in VIDA for vehicle installation.

**HANDLING:**
Ensure the replacement crate is kept in its original condition. The replacement battery pack shall be removed from its original packaging and installed in the vehicle as soon as possible in order to maintain protection against mechanical impact or tampering.
Once the replacement battery is removed, store this container in a safe and secure place to be used for the transportation of the defective hybrid battery.

- Do not remove or cover up any of the hazmat shipping labels on the outside of the replacement container.
- Do not damage the replacement crate.
- Do not stack anything on top of the replacement crate.
- The battery pack shall always be kept in an upright position.
- If you damage the crate you will be charged for a replace crate of $250 plus shipping and hazmat labeling cost.

Carefully insert the defective hybrid battery in the replacement crate as soon as possible and move this crate to a safe and secure staging location.

It is mandatory the defective hybrid battery be shipped to the supplier LG Chem within 2 days of receiving the replacement battery from LG Chem. The defective battery must be received by LG Chem 7 days of receipt of the replacement battery.

**SHIPPING:**
You will receive an LG RMA Number from Volvo Technical Helpdesk via of the open VR Case. Please complete the attached FedEx VICS Bill of lading. Retailers only need to fill out their return address and the RMA number.

All other information is pre-filled. Do not alter any information on this Bill of lading. Located at the end of this bulletin are 4 LG Chem return shipping labels pre-address to LG Chem Power Inc.

- Cut out one of the labels.
- Fill out this label completely. Ensure the RMA Number is on the label.
- Secure the label to the outside of the replacement container.
- Contact the FedEx Freight at the number below and request a pick-up:
  
  FedEx Freight Customer Service 1.866.393.4585

**Ship to:**
LG Chem Power Inc. (LGCPI)
1064 Chicago Rd.
Troy, MI. 48083
Attention: Michael Staszek
Quality Customer Service Supervisor

Once the FedEx Driver arrives, it is important to give the driver the completed FedEx Bill of Lading form and a copy of the attached Safety Data Sheets. Print the Safety Data Sheet from Service Manager Bulletin 31-001A.

You should also attach a copy of the Safety Data Sheet to the outside of the replacement shipping crate using the Volvo Poly Bags 7777563.
Warranty and Technical Documents
These Documents must be included inside the crate with the defective battery. 
• Technical Helpdesk Vehicle Report - (mandatory) see sample below.
• Shipping Label affix to the outside of the replacement crate. (mandatory)
• Material Data Safety Sheets affix to the outside of the replacement crate. (mandatory)
• Copy of the original Repair order-see sample below.
PLEASE DO NOT COVER OR REMOVE ANY OF THE HAZMAT LABELS


**SHIP FROM**

Name: _____________________________________________________
Address: ___________________________________________________
Address: ___________________________________________________
City/State/Zip: _______________________________________________
SID#: __________________________ SID# _______________________

**SHIP TO**

Name: LG CHEM POWER INC (LG CPI)
Address: 1064 CHICAGO ROAD
Address: ATTENTION: MIKE STASZEK Quality Customer Service Supervisor
City/State/Zip: TROY MICHIGAN, 48083
CID#: ______________________________________________________

**THIRD PARTY FREIGHT CHARGES BILL TO:**

Name: Volvo Cars USA c/o Williams & Associates
Address: 405 E. 78th St.
City/State/Zip: Bloomington, MN 55420 FedEx ACCT# 466499900

**BILL OF LADING NUMBER:**

CARRIER: FedEx Freight
TRAILER:________________________
SCAC: ____________________________ Pro Number: _______________________

**SPECIAL INSTRUCTIONS:**

Emergency Phone Number: 800-424-9300

**CUSTOMER ORDER INFORMATION**

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**CARRIER INFORMATION**

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**Hazardous Material Package Type:** BOX

**DANGEROUS GOODS**

**BOX DIMS:** 68 X 29X 34 in

**Emergency Guide:** 138

**CLASS 9**

**GRAND TOTAL**

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**NOTE:** (1) Limitation for loss or damage on this shipment may be applicable. See 49 U.S.C. 14706(c)(1)(A) and (B). NOTE: (2) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See NMFC Sec. 2(e), Item 360.

**SHIPPER SIGNATURE / DATE**

This is to certify that the above named materials are properly classified, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

**TRAILER LOADED:**

- By Driver/Pallets said to contain
- By Driver/Pieces

**FREIGHT COUNTED:**

- By Shipper
- By Driver/Pallets said to contain
- By Driver/Pieces

**CARRIER SIGNATURE / PICKUP DATE**

Carrier acknowledges receipt of packages and required placards. Carrier certifies, emergency response information was made available and/or carrier has the DOT emergency response guidbook or equivalent documentation in the vehicle.
Sec. 1. (a) The carrier or the party in possession of any of the property described in this bill of lading shall be liable as at common law for any loss thereof or damage thereto, except as hereinafter provided.

(b) No carrier shall be liable for any loss or damage to a shipment or for any delay caused by an Act of God, the public enemy, the authority of law, or the act or default of shipper. Except in the case of negligence of the carrier or party in possession, the carrier or party in possession shall not be liable for loss, damage or delay which results: when the property is stopped and held in transit upon request of the shipper, owner or party entitled to make such requests; or from faulty or impassible highway, or by lack of capacity of a highway bridge or ferry; or from a defect or vice in the property; or from riots or strikes. The burden to prove freedom from negligence is on the carrier or the party in possession.

Sec. 2. Unless arranged or agreed upon, in writing, prior to shipment, carrier is not bound to transport a shipment by a particular schedule or in time for a particular market, but is responsible to transport with reasonable dispatch. In case of physical necessity, carrier may forward a shipment via another carrier.

Sec. 3. (a) As a condition precedent to recovery, claims must be filed in writing with: any participating carrier having sufficient information to identify the shipment.

(b) Claims for loss or damage must be filed within nine months after the delivery of the property (or, in the case of export traffic, within nine months after delivery at the port of export), except that claims for failure to make delivery must be filed within nine months after a reasonable time for delivery has elapsed.

(c) Suits for loss, damage, injury or delay shall be instituted against any carrier no later than two years and one day from the day when written notice is given to the carrier to the claimant that the carrier has disallowed the claim or any part or parts of the claim specified in the notice. Where claims are not filed or suits are not instituted thereon in accordance with the foregoing provisions, no carrier shall be liable, and such claims will not be paid.

(d) Any carrier or party liable for loss of or damage to any of said property shall have the full benefit of any insurance that may have been effected, upon or on account of said property, so far as this shall not avoid the policies or contracts of insurance. PROVIDED, that the carrier receiving the benefit of such insurance will reimburse the claimant for the premium paid on the insurance policy or contract.

Sec. 4. (a) If the consignee refuses the shipment tendered for delivery by carrier or if carrier is unable to deliver the shipment, because of fault or mistake of the consignor or consignee, the carrier’s liability shall then become that of a warehouseman. Carrier shall promptly attempt to provide notice, by telephonic or electronic communication as provided on the face of the bill of lading, if so indicated, to the shipper or the party, if any, designated to receive notice on this bill of lading. Storage charges, based on carrier’s tariff, shall start no sooner than the next business day following the attempted notification. Storage may be, at the carrier’s option, in any location that provides reasonable protection against loss or damage. The carrier may place the shipment in public storage at the owner’s expense and without liability to the carrier.

(b) If the carrier does not receive disposition instructions within 48 hours of the time of carrier’s attempted first notification, carrier will attempt to issue a second and final confirmed notification. Such notice shall advise that if carrier does not receive disposition instructions within 10 days of that notification, carrier may offer the shipment for sale at a public auction and the carrier has the right to offer the shipment for sale. The amount of sale will be applied to the carrier’s invoice for transportation, storage and other lawful charges. The owner will be responsible for the balance of charges not covered by the sale of the goods. If there is a balance remaining after all charges and expenses are paid, such balance will be paid to the owner of the property sold hereunder, upon claim and proof of ownership.

(c) Where carrier has attempted to follow the procedure set forth in subsections 4(a) and (b) above and the procedure provided in this section is not possible, nothing in this section shall be construed to abridge the right of the carrier at its option to sell the property under such circumstances and in such manner as may be authorized by law. When perishable goods cannot be delivered and disposition is not given within a reasonable time, the carrier may dispose of property to the best advantage.

(d) Where a carrier is directed by consignee or consignor to unload or deliver property at a particular location where consignor, consignee, or the agent of either, is not regularly located, the risk after unloading or delivery shall not be that of the carrier.

Sec. 5. (a) In all cases not prohibited by law, where a lower value than the actual value of the said property has been stated in writing by the shipper or has been agreed upon in writing as the released value of the property as determined by the classification or tariffs upon which the rate is based, such lower value plus freight charges if paid shall be the maximum recoverable amount for loss or damage, whether or not such loss or damage occurs from negligence.

(b) No carrier hereunder will carry or be liable in any way for any documents, coin money, or for any articles of extraordinary value not specifically rated in the published classification or tariffs unless a special agreement to do so and a stipulated value of the articles are endorsed on this bill of lading.

Sec. 6. Every party, whether principal or agent, who ships explosives or dangerous goods, without previous full written disclosure to the carrier of their nature, shall be liable for and indemnify the carrier against all loss or damage caused by such goods. Such goods may be warehoused at owner’s risk and expense or destroyed without compensation.

Sec. 7. (a) The consignor or consignee shall be liable for the freight and other lawful charges accruing on the shipment, as billed or corrected, except that collect shipments may move without recourse to the consignor when the consignor so stipulates by signature or endorsement in the space provided on the face of the bill of lading. Nevertheless, the consignor shall remain liable for transportation charges where there has been an erroneous determination of the freight charges assessed, based upon incomplete or incorrect information provided by the consignor.

(b) Notwithstanding the provisions of subsection (a) above, the consignee’s liability for payment of additional charges that may be found to be due after delivery shall be as specified by 49 U.S.C. §13706, except that the consignee need not provide the specified written notice to the delivering carrier if the consignee is a for-hire carrier.

(c) Nothing in this bill of lading shall limit the right of the carrier to require the prepayment or guarantee of the charges at the time of shipment or prior to delivery. If the description of articles or other information on this bill of lading is found to be incorrect or incomplete, the freight charges must be paid based upon the articles actually shipped.

Sec. 8. If this bill of lading is issued on the order of the shipper, or his agent, in exchange or in substitution for another bill of lading, the shipper’s signature on the prior bill of lading or in connection with the prior bill of lading as to the statement of value or otherwise, or as to the election of common law or bill of lading liability shall be considered a part of this bill of lading as fully as if the same were written on or made in connection with this bill of lading.

Sec. 9. If all or any part of said property is carried by water over any part of said route, such water carriage shall be performed subject to the terms and provisions and limitations of liability specified by the “Carriage of Goods By Sea Act” and any other pertinent laws applicable to water carriers.
 SAMPLE VEHICLE REPORT

Function Group: 31130 (Battery, High Voltage)
Customer Symphony Code: YL
Vehicle List

Reference 733300
Repeat Repair N
Part Available N
Part No

Anat’hy Raimondi / anthony.raimondi@volvocars.com / +1-201-768-7300 / 01/19/2016 02:15:06 PM

Case has been changed to prior approval and battery will be sent via parts support.
Best Regards,
Anthony

Leo Werberg / leo.werberg@volvocars.com / 201-294-8923 / 01/19/2016 11:00:46 AM

Let’s go ahead and get a HV battery on the way to this car. Please reach out to Caribe and Carin as needed. We can then discuss if we should be at the car for the actual replacement.

Thanks, Leo

Erik Basgaard / erikbasgaard@volvocars.com / 617-901-8233 / 01/15/2016 02:16:19 PM

Hi Brian,

Thanks for the help today.

Discussed this case with Brian and Leo. Leo performed remote diagnostics from Rockleigh. Various things were tested and tried such as BECM reboots, resets, etc. DTC P010F000 - Hybrid/EV Battery Cell Balancing Circuit "E" Range/Performance returns after clearing.

Leo will discuss further with support and let us know how to proceed. We will touch base most week.

BR/Erik

Brian Fitzpatrick / blitzpatrick@ingenre.com / 01/15/2016 10:38:08 AM

Symptom: (As experienced by customer)
"Battery Charge Fault" and Hybrid System Failure" is displayed while running. HV battery cannot be charged by engine or by charging port.

Diagnostics:
(Have the symptom been verified?)
Describe fault tracing, analysis, values etc.)
Checked DTCs and found indication that battery cell "E" is lower than other cells. HV battery is reading 350V and 33% SOC.

Cause:
(What was most likely causing the symptom?)
It would appear the fault is internal to the HV battery.

Remedy:
(What was done to solve the symptom?)
Battery Cell "E" may be able to be charged or entire HV battery.
FOUND MESSAGE BECAME PRESENT FOR CHARGING SYSTEM FAILURE, ATTEMPTED TO CHARGE IN "SAVE" MODE AND MESSAGE WAS DISPLAYED FOR HYBRID SYSTEM FAILURE. FAULT TRACED PER CSC "YL". CHECKED DTCs AND FOUND BECM-P0DBF00 STORED. FAULT TRACED AND FOUND LIKELY CAUSE IS INTERNAL FAULT IN HV BATTERY CELL "E". CONTACTED THD PER CASE RE #1234567. ASSISTED THD WITH REMOTE DIAGNOSTICS, ATTEMPTED BECM RELOAD, BATTERY RESETS AND OTHER DIAGNOSTICS TO RESTORE CELL BALANCING. ALL ATTEMPTS FAILED TO RESOLVE CONCERN. PER THD, REPLACED HV BATTERY AND PERFORMED BECM RELOAD. CLEARED DTCs AND TESTED CHARGING. CHARGING NOW FUNCTIONS BUT LEDS AT CHARGING OUTLET DO NOT LIGHT OR GIVE ANY INDICATION. FAULT TRACED PER CSC "YW". FAULT TRACED LED FAULT. DISCONNECTED MANUAL SERVICE DISCONNECT AND REMOVED LF FENDER LINING TO EXPOSE CHARGING OUTLET. INSPECTED OUTLET AND FOUND CONNECTOR HAS BEEN PULLED OUT OF LED PORTION OF CHARGING OUTLET DUE TO ZIP TIE CAUSING TOO MUCH TENSION ON WIRING. REMOVED ZIP TIE AND SECURED CONNECTOR. CHECKED WIRING TO BE SURE WIRING DOES NOT HAVE EXCESSIVE MOVEMENT-OK. RESTORED HV MSD AND TESTED LEDS AND FOUND ALL CHARGING INDICATIONS ARE FUNCTIONING PROPERLY. TEST DROVE AND FOUND ALL FUNCTIONS ARE NOW OPERATIONAL.

***********************************************
YOUR COMPLETE SATISFACTION IS OUR GOAL. IF FOR ANY REASON YOUR VISIT WAS NOT OUTSTANDING

WE APPpreciATE YOUR BUSINESS.

Thank You for Your Business!
Please use this shipping label for LG Chem Power Inc. (LGCPI)

You will use FedEx Freight Carriers for transportation. All Lines on this label must be filled out completely.

Please Note: The phone number for FedEx Freight Customer Service 1.866.393.4585
FedEx LTL Volume Services 1.888.465.5646

Please make a note of where this label and phone number can be found for future reference.
LG Return RMA Number

____________________

Attach to outside of shipping container
OUTGOING SHIPMENT CORRECTLY PACKAGED
Sample of a completed bill of lading with bar code from the FedEx driver.

**Ship From**
- Name: [Redacted]
- Address: [Redacted]
- City/State/Zip: [Redacted]
- SID#: [Redacted]

**Ship To**
- Name: LG CHEM POWER INC (LCPI)
- Address: 1054 CHICAGO ROAD
- City/State/Zip: TROY MICHIGAN, 48083
- CID#: [Redacted]

**Third Party Freight Charges Bill To:**
- Name: Volvo Cars USA c/o Williams & Associates
- Address: 405 E. 7thSt.
- City/State/Zip: Bloomington, MN 55420
- FedEx ACCT #: 46649900

**Special Instructions:** EMERGENCY CONTACT CHEM TECH 1.800.424.9300

**Bill of Lading Number:** 365420943-6

**Freight Charge Terms:** Prepaid

**Customer Order Information**

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**Commodity Description**
- UN 3840, Lithium-ion Batteries.9.11

**Hazardous Material Package Type:** BOX

**Dangerous Goods**

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**COD Amount:** $ Collect

**Carrier Information**

- Carrier: FedEx Freight
- Carrier Order: [Redacted]
- SCAC: [Redacted]
- Pro Number: [Redacted]
- CARRIER SIGNATURE / PICKUP DATE: 2-4-16

**Original not negotiable. See last page for further terms and conditions.**
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<td>SCRAP OR CORE</td>
<td>31391513-0</td>
<td>DELIVERY VALVE</td>
<td>1.0</td>
<td>TMA-Part must be returned within 30 days</td>
</tr>
<tr>
<td>993910D</td>
<td>47039072</td>
<td>04/01/16</td>
<td>47039072</td>
<td><em>RETURN</em></td>
<td>36001017-0</td>
<td>RADIO, EXCH</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>993928A</td>
<td>47042484</td>
<td>04/01/16</td>
<td>47042484</td>
<td><em>RETURN</em></td>
<td>36000041-0</td>
<td>STARTER MOTOR, EXCH</td>
<td>1.0</td>
<td>TMA-Part must be returned within 30 days</td>
</tr>
</tbody>
</table>
“Right first time in Time”

This SDS is required for the shipping of the Lithium-ion battery. In this process, a copy of the SDS document must be on the outside of the shipment crate and a copy of it must be given to the FedEx driver.

Print pages 2 – 6 of this Service Manager Bulletin (SDS Document)
## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**PRODUCT NAME:** LGCHEM P2.7 LITHIUM-ION POLYMER BATTERY      **PART NO:** 31473177  

**MANUFACTURER:** LG Chemical Limited  
Twin Tower  
Youido-Dong, Youngdeungpo-Ku  
Seoul, Korea

**EMERGENCY TELEPHONE NUMBER:** +82-2-3773-6730

## 2. HAZARDS IDENTIFICATION

### Primary routes of entry

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>No</td>
</tr>
<tr>
<td>Skin absorption</td>
<td>No</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No</td>
</tr>
</tbody>
</table>

### Symptoms of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>No effect under routine handling and use.</td>
</tr>
<tr>
<td>Skin absorption</td>
<td>No effect under routine handling and use.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No effect under routine handling and use.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No effect under routine handling and use.</td>
</tr>
<tr>
<td>Reported as carcinogen</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Emergency overview</td>
<td>May explode in a fire, which could release hydrogen fluoride gas. Use extinguishing media suitable for materials burning in fire.</td>
</tr>
</tbody>
</table>
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>%</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Foil</td>
<td>2-10</td>
<td>7429-90-5</td>
</tr>
<tr>
<td>Metal Oxide (proprietary)</td>
<td>20-50</td>
<td></td>
</tr>
<tr>
<td>- Manganese</td>
<td>5-15</td>
<td></td>
</tr>
<tr>
<td>- Nickel</td>
<td>3-6</td>
<td></td>
</tr>
<tr>
<td>- Cobalt</td>
<td>3-6</td>
<td></td>
</tr>
<tr>
<td>Polyvinylidene Fluoride (PVDF)</td>
<td>&lt;5</td>
<td>24937-79-9</td>
</tr>
<tr>
<td>Copper Foil</td>
<td>5-20</td>
<td>7440-50-8</td>
</tr>
<tr>
<td>Carbon (proprietary)</td>
<td>10-20</td>
<td>7440-44-0</td>
</tr>
<tr>
<td>Electrolyte (proprietary)</td>
<td>10-20</td>
<td></td>
</tr>
<tr>
<td>Aluminum, Copper plate and inert materials</td>
<td>Remainder</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Lithium-equivalent Content: 7.72g (95.83 Watt)

4. FIRST-AID MEASURES

Inhalation: Not a health hazard.
Eye contact: Not a health hazard.
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 MEASURES

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 fire-fighting instructions: If possible, remove cell(s) from fire-fighting area. If heated above 150°C, cell(s) may explode/vent.
Fire-fighting equipment: Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6. ACCIDENTAL RELEASE MEASURES

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: Recommend to store the cell in an environment with under 70% RH free from corrosive gas within in a temperature range of -20 to 35°C. A temperature of 60°C or higher will accelerate the deterioration of battery performance.

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

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 damaged, 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. TOXICOLOGICAL INFORMATION

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

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Teratogenicity</th>
<th>Reproductive toxicity</th>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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 bioaccumulative. 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. TRANSPORT INFORMATION

UN No. 3480
Proper shipping name: Lithium-Ion Batteries
Class 9 packing group II
hazard label: Miscellaneous

ICAO/IATA
Packing instruction: 965
Maximum gross weight per package on passenger and cargo aircraft: 5 kg
Maximum gross weight per package on cargo only aircraft: 35 kg
Special provision: A45, A88, A99

IMO
Packing instruction: P903
Special provision: 188, 230, 310, 957
EmS: F-A, S-I

US DOT
This product is not subject to any other requirements of dangerous goods under 49 CFR 173.185 (Lithium Batteries and Cells).

15. REGULATORY INFORMATION

OSHA hazard communication standard (29 CFR 1910.1200): Hazardous
This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.
16. OTHER INFORMATION

For further information, see: For more information, consult the Technical Data Sheet (www.lgchem.com).
Sources of key data used to Information contained in this safety data sheet is based on LG Chem owned compile the datasheet: data and public sources deemed valid or acceptable. The absence of data elements indicates, that no data meeting these requirements is available.

Further information: This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality.