MATERIAL SAFETY DATA SHEET

Model A7 Lithium-Ion Polymer Battery for PHEV

LG CHEMICAL LIMITED

History

Document No.	MSDS-Cell-A7			
Revision	**MM-DD-YY**	**Writer**	**Content**	**Remark**
1.0	20-08-13	Seungyeob Park	Establishment	

Chemical Product and Company Identification

Product Identification

LGCHEM A7 Lithium-Ion Polymer Battery

Manufacturer

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

Emergency Telephone Number

82-2-3773-3047

1. Composition Information

Hazardous Ingredients	%	CAS Number
Aluminum Foil	2-10	7429-90-5
Metal Oxide (proprietary)	20-50	
Polyvinylidene Fluoride (PVDF)	<5	24937-79-9
Copper Foil	5-20	7440-50-8
Carbon (proprietary)	10-30	7440-44-0
Electrolyte (proprietary)	10-30	
Aluminum, Copper plate and inert materials	Remainder	N/A
PE(Polyethylene)	<10	9002-88-4

Lithium-equivalent Content: 13.7g(164.52Wh)

2. Hazards Identification

Emergency Overview

May explode in a fire, which could release hydrogen fluoride gas.
Use extinguishing media suitable for materials burning in fire.

Primary routes of entry

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

Symptoms of exposure

Skin contact
No effect under routine handling and use.

Skin absorption
No effect under routine handling and use.

Eye contact
No effect under routine handling and use.

Inhalation
No effect under routine handling and use.

Reported as carcinogen
Not applicable

3. 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.

4. Fire Fighting Measures

General Hazard

Battery is not flammable but some internal organic materials will burn f the cell os incinerated.

Extinguishing Media

Use large amounts of water or CO2 extinguisher for battery related fire.
Use an ABC extinguisher suitable if other materials are involved in a fire.
If combustive metals such as Mg, Na, K are involved in a fire, do not use water. Hydrogen gas may be evolved and there can be an explosion. Use LITH-X, copper powder fire extinguishers or sand which can act as smothering agents for metal-related fire.

** LG Chem lithium ion polymer battery does not contain any metallic lithium. Therefore, ordinary extinguisher can be used to extinguish a fire.*

Fire Fighting Instructions

If a fire occurs during battery charge, shut off the power to charger.
If possible, remove batteries from the fire fighting area. If the batteries are heated above 150℃, there may be a vent or an explosion. Water is effective to cool down the batteries and around area.

Fire Fighting Instructions

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear. Hazardous fumes including carbon monoxide, carbon dioxide, various hydrocarbons and HF can be generated during a fire.

5. 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.

6. Handling and Storage

Handling

No special protective clothing required for handling individual cells.

Storage

Store in a cool, dry place.

7. 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.

8. 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

9. 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.

10. Toxicological Information

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

Sensitization	Teratogenicity	Reproductive toxicity	Acute toxicity

NO	NO	NO	NO

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

11. 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.

12. Disposal Considerations

California regulated debris

RCRA Waste Code : Non-regulated

Dispose of according to all federal, state, and local regulations.

13. 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).

14. Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

___✔___Hazardous _____Non-hazardous