

Safety Data Sheet

according to WHS Regulations

Printing date 29.04.2021

Revision: 13.04.2021

1 Identification

Product Name: LG Energy Solution JH5 Lithium-Ion Battery Cell

Recommended Use of the Chemical and Restriction on Use: Use in portable electronic equipment, including RESU10H Prime & RESU16H Prime

Details of Manufacturer or Importer:

LG Energy Solution Australia

Unit 12, 35 Dunlop Rd,

Mulgrave, VIC 3170 **Phone Number:** 0429 066 633 or 1300 178 064

Emergency telephone number: National Poisons Information Centre: 13 11 26

2 Hazard(s) Identification

Hazardous Nature:

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



Health hazard

STOT RE 2

H373 May cause damage to the bones and the teeth through prolonged or repeated exposure.



Skin Corrosion/Irritation 2

H315 Causes skin irritation.

Serious Eye Damage/Irritation 2A

H319 Causes serious eye irritation.

Signal Word Warning

Hazard Statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H373 May cause damage to the bones and the teeth through prolonged or repeated exposure.

Precautionary Statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves / eye protection / face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P321 Specific treatment (see on this label).

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/attention if you feel unwell.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national regulations.

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3 Composition and Information on Ingredients

Chemical Characterization: Mixtures**Description:** Article containing the mixture of substances listed below with nonhazardous additions.**Hazardous Components:**

CAS: 7429-90-5	Aluminium	<10%
CAS: 7440-50-8	Copper	<10%
CAS: 21324-40-3	Phosphate(1-), hexafluoro-, lithium ⚠ Acute Toxicity (Oral) 3, H301; ⚠ STOT RE 1, H372; ⚠ Skin Corrosion/Irritation 1A, H314; Serious Eye Damage/Irritation 1, H318	<5%

Non Hazardous Components:

CAS: 7440-44-0	Activated carbon	30%
CAS: 24937-79-9	Ethene, 1,1-difluoro-, homopolymer	<5%

Additional information:

The battery is sealed hermetically and designed to withstand temperatures and pressures encountered during normal use. Thus, the ingredients have no hazard potential except if the battery is violated or dismantled. If exposed to a fire, mechanical shocks, and electric stress by miss-use, the battery cell case will be breached and the hazardous materials may be released and acrid gas may be emitted. Therefore the batteries should not be short circuited, overcharged, punctured, incinerated, immersed in water, force discharged or exposed to temperatures above the temperature range of the cell or battery.

4 First Aid Measures

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.
This information is relevant only if the battery is broken and contents are exposed.

Skin Contact:

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek immediate medical attention.
This information is relevant only if the battery is broken and contents are exposed.

Eye Contact:

In case of eye contact, rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Seek immediate medical attention.
This information is relevant only if the battery is broken and contents are exposed.

Ingestion:

If swallowed, do not induce vomiting. Do not give anything by mouth to an unconscious person. Give as much water as can take. Seek immediate medical attention.
This information is relevant only if the battery is broken and contents are exposed.

Symptoms Caused by Exposure:

Inhalation: Contents of an open battery may cause respiratory irritation.

Skin Contact: Contents of an open battery cause skin irritation.

Eye Contact: Contents of an open battery cause serious eye irritation.

Ingestion: The contents of an open battery can cause irritation of mouth, oesophagus and gastrointestinal tract.

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5 Fire Fighting Measures

Suitable Extinguishing Media:

Use fire extinguishing methods suitable to surrounding conditions.

Dry sand, dry chemical powder, carbon dioxide, alcohol resistant foam, particulate powder fire extinguishing agent, water.

Specific Hazards Arising from the Chemical:

Hazardous combustion products include oxides of carbon, hydrogen fluoride and other irritating and toxic gases.

This product is not flammable, but ingredients will burn in a fire.

If heated above 125 °C batteries may burst and release hazardous, flammable or corrosive materials.

Batteries close to fire should be removed if safe to do so. Use water spray to cool fire exposed batteries.

Minimise run off from fire fighting entering drains and watercourses.

HAZChem Code: 2Y

Special Protective Equipment and Precautions for Fire Fighters:

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:

In case of leaking batteries, wear approved respiratory protection, chemical goggles, impervious gloves, protective clothing, impervious clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Do not touch or walk through spilled material. Extinguish all sources of ignition.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:

Absorb spilled liquid with sand, earth, vermiculite or some other non flammable absorbent material. Carefully collect batteries and place in an appropriate container for disposal. Clean the area of spill thoroughly with water and detergent.

This information is relevant only if the battery is broken and contents are exposed.

7 Handling and Storage

Precautions for Safe Handling:

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours.

Avoid mechanical or electrical abuse.

DO NOT short circuit or install incorrectly.

Batteries may explode, pyrolyze or vent if disassembled, crushed, overcharged or exposed to high temperatures.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet.

Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Protect from direct sunlight. Do not store with other metal objects where they may be short circuited.

Keep in the original container. Protect from physical damage.

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8 Exposure Controls and Personal Protection

Exposure Standards:**CAS: 7440-50-8 Copper**

WES	TWA: 1* 0.2** mg/m ³ *dust & mists (as Cu) **fume
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CAS: 7429-90-5 Aluminium

WES	TWA: 10* 5** mg/m ³ *metal dust; **welding, pyro powders
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Engineering Controls: Ensure adequate ventilation of the working area.**Respiratory Protection:** Respiratory protection is not required under normal use conditions.**Skin Protection:**

Rubber, neoprene, vinyl coated or PVC gloves, impervious clothing covering head and neck and safety boots are recommended. See Australian/New Zealand Standard AS/NZS 2161 and Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Wear safety glasses with side shields or chemical goggles with secondary protection of a face shield. See Australian/New Zealand Standard AS/NZS 1337.

9 Physical and Chemical Properties

Appearance:

Form:	Solid
Colour:	White
Odour:	Odourless
Odour Threshold:	No information available
pH-Value:	Not applicable.
Melting point/freezing point:	Not applicable
Initial Boiling Point/Boiling Range:	Not applicable
Flash Point:	Not applicable
Flammability:	Product is not flammable
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	Not applicable
Explosion Limits:	
Lower:	Not applicable
Upper:	Not applicable
Vapour Pressure:	Not applicable.
Density:	Not applicable
Vapour Density:	Not applicable.
Evaporation Rate:	Not applicable
Solubility in Water:	Not applicable
Partition Coefficient (n-octanol/water):	Not applicable
Viscosity:	Not applicable

10 Stability and Reactivity

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.**Chemical Stability:** Stable at ambient temperature and under normal conditions of storage and use.

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Conditions to Avoid:

Direct sunlight.

Do not disassemble, crush or short circuit. Avoid mechanical or electrical abuse.

Incompatible Materials: No further relevant information available.**Hazardous Decomposition Products:**

Hazardous combustion products include oxides of carbon, hydrogen fluoride and other irritating and toxic gases.

11 Toxicological Information

Toxicity:**LD50/LC50 Values Relevant for Classification:****CAS: 7440-50-8 Copper**

Oral LD50 >2,000 mg/kg (rat)

Acute Health Effects**Inhalation:** Contents of an open battery may cause respiratory irritation.**Skin:** Contents of an open battery cause skin irritation.**Eye:** Contents of an open battery cause serious eye irritation.**Ingestion:**

The contents of an open battery can cause irritation of mouth, oesophagus and gastrointestinal tract.

Skin Corrosion / Irritation: Causes skin irritation.**Serious Eye Damage / Irritation:** Causes serious eye irritation.**Respiratory or Skin Sensitisation:** Based on classification principles, the classification criteria are not met.**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.**Carcinogenicity:** This product does NOT contain any IARC listed chemicals.**Reproductive Toxicity:** Based on classification principles, the classification criteria are not met.**Specific Target Organ Toxicity (STOT) - Single Exposure:**

Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Causes damage to the bones and teeth through prolonged or repeated exposure.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.**Chronic Health Effects:** No information available**Existing Conditions Aggravated by Exposure:** No information available

12 Ecological Information

Ecotoxicity:**Aquatic toxicity:****CAS: 7440-50-8 Copper**

EC50/48 h 0.792 mg/l (daphnia)

EC50/72 h 0.333 mg/l (algae)

LC50/96 h 0.0068-0.0156 mg/l (fathead minnow)

0.0081 mg/l (fish)

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Persistence and Degradability: No data available on finished product.**Bioaccumulative Potential:**

Some materials within the cell are bioaccumulative. Under normal conditions, these materials are contained and pose no risk to the environment.

Mobility in Soil: No data available on finished product.**Other adverse effects:** No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number ADG, IMDG, IATA	UN3480
Proper Shipping Name ADG, IMDG, IATA	LITHIUM ION BATTERIES
Dangerous Goods Class ADG Class:	9 (M4) Miscellaneous dangerous substances and articles.
Subsidiary Risk: IMDG Class:	9 Miscellaneous dangerous substances and articles.
Packing Group:	None
Marine pollutant:	
EMS Number:	F-A,S-I
Hazchem Code:	2Y
Special Provisions:	188, 230, 310, 348, 376, 377, 384, 387, 390
Limited Quantities:	0
Packagings & IBCs - Packing Instruction:	P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906

15 Regulatory Information

Australian Inventory of Industrial Chemicals:

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Poison Schedule:

Not a scheduled poison.

16 Other Information

Date of Preparation or Last Revision: 13.04.2021**Prepared by:** MSDS.COM.AU Pty Ltdwww.msds.com.au**Abbreviations and acronyms:**

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Acute Toxicity (Oral) 3: Acute toxicity - oral – Category 3

Skin Corrosion/Irritation 1A: Skin corrosion/irritation – Category 1A

Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2

Serious Eye Damage/Irritation 1: Serious eye damage/eye irritation – Category 1

Serious Eye Damage/Irritation 2A: Serious eye damage/eye irritation – Category 2A

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Data altered compared to the previous version: Section 5: Suitable Extinguishing Media**Disclaimer**

This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - July 2020”

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