

Section 1 - Chemical Product and Company Identification

Description : Polymer Lithium-ion Battery
Details of the Supplier : Premier Farnell plc
150 Armley Road
Leeds
LS12 2QQ
+44 (0) 8701 202530
Emergency Telephone : +44 1865 407333

Section 2 - Hazards Identification

Emergency overview : This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the below hazards exist.

CAS# 12013-69-3

Classification according to GHS

Carcinogenicity (1)

Reproductive toxicity (1A, 1B)

Specific target organ toxicity, repeated exposure (1) (central nervous system, blood, kidney)

Label elements

Hazard pictogram(s):



Signal word : Warning

Hazard statement(s):

H350 May cause cancer

H360 May damage fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure (respiratory system, kidney)

Precautionary statement(s):

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves, protective clothing, eye protection, face protection.

P260 Do not breathe vapours.

P264 Wash skin and clothing thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response:

P308 + P313 IF exposed or concerned : Get medical advice.

P314 Get medical advice if you feel unwell.

Storage

P405 Store locked up.

Disposal:

P501 Contents handling to approved waste treatment plants.

Safety Data Sheet

CAS# 7664-93-9

Classification according to GHS

Acute toxicity, oral (5)

Acute toxicity, inhalation (1 , 2)

Skin corrosion/irritation (1A, 1 B, 1 C)

Serious eye damage/eye irritation (1)

Specific target organ toxicity, single exposure (1) (respiratory system)

Specific target organ toxicity, repeated exposure (1) (respiratory system)

Hazardous to the aquatic environment, acute hazard (3)

Label elements

Hazard pictogram(s):



Signal word : Danger

Hazard statement(s):

H303 May be harmful if swallowed

H330 Fatal if inhaled

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H372 Causes damage to organs through prolonged or repeated exposure (respiratory system)

H402 Harmful to aquatic life

Precautionary statement(s):

Prevention:

P260 Do not breathe dusts or mists.

P271 Use only outdoors or in a well-ventilated area.

P284 In case of inadequate ventilation wear respiratory protection.

P321 Specific treatment(See additional emergency instructions).

P264 Wash skin and clothing thoroughly after handling.

P280 Wear protective gloves, protective clothing , eye protection, face protection.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Response:

P312 Call a POISON CENTER, if you feel unwell.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 Immediately call a POISON CENTER.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting .

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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 if you feel unwell.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed .

P405 Store locked up.

Disposal:

P501 Contents handling to approved waste treatment plants.

Other hazards

Physical and chemical hazards: See Section 10

Human health hazards: See Section 11

Environmental hazards: See Section 12

Section 3 - Composition/Information on Ingredients

Chemical characterization : Mixture

Chemical Composition	CAS No.	EC#	Weight(%)
Plumbate (4-), calcium (1 :2), (T-4)-	12013-69-3	234-591-3	60-70
Acrylonitrile-butadiene- styrene terpolymer	9003-56-9	618-371 -8	5
Glass, oxide, chemicals	65997-17-3	266-046-0	5
Sulfuric acid	7664-93-9	231-639-5	10-20

Section 4 - First Aid Measures

Description of first aid measures

General information No special measures required.

After eye contact

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing

Do not induce vomiting. Get medical attention.

Personal protective equipment for first-aid responders: No data available.

Most important symptoms/effects, acute and delayed: No data available.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

Section 5 - Fire Fighting Measures

Suitable extinguishing media:

Use extinguishing agent suitable for local conditions and the surrounding environment.

Such as dry powder , CO₂.

Unsuitable extinguishing media:

No data available.

Specific Hazards arising from the chemical:

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation. TOXIC; inhalation, ingestion or skin contact with material may cause severe injury or death. Contact with molten substance may cause severe burns to skin and eyes. Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

Specific protective actions for fire-fighters:

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6 - Accidental Release Measures

Personal precautions:

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Protective equipment:

No data available.

Emergency procedures:

Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and materials for containment and cleaning up:

All waste must refer to the United Nations, the national and local regulations for disposal.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7 - Handling and Storage

Precautions for safe handling:

Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking.

Ground containers when transferring liquid to prevent static accumulation and discharge.

Information about fire and explosion protection

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Conditions for safe storage, including any incompatibilities:

Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place.

Information about storage in one common storage facility

Keep away from heat, avoiding the long time of sunlight.

Further information about storage conditions

Keep container tightly sealed.

Specific and use

No data available.

Section 8 - Exposure Controls/Personal Protection

Control parameters

CAS No.	ACGIH	NIOSH	OSHA
12013-69-3	N/A	N/A	N/A
9003-56-9	N/A	N/A	N/A
65997-17-3	N/A	N/A	N/A
7664-93-9	TLV-1WA 0.2mg/m ³	REL-1WA 1 mg/m ³	PEL-1WA 1mg/m ³

Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.

Personal Protective Equipment:

Respiratory protection : Wear suitable protective mask. For a large large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.
Hand Protection : Wear appropriate protective gloves to reduce skin contact.
Eye Protection : Wear safety goggles or eye protection combined with respiratory protection.
Skin and Body Protection : Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

General information

Appearance : Black
Form : Prismatic
Odour : Not available.
Odour threshold : Not available.
pH : Not available.
Melting point/freezing point : Not available.
Initial boiling point and boiling range : Not available.
Flash Point : Not available.
Evaporation rate : Not available.
Flammability (solid, gas) : Not available.
Explosion Limits (vol% in air) : Not available.
Vapour pressure, kPa at 20°C : Not available.
Vapor density : Not available.
Density/Relative density (water= 1) : Not available.
Solubility(ies) : Not available.
Partition coefficient: n-octanol/water : Not available.
Auto-ignition temperature : Not available.
Decomposition temperature : Not available.
Viscosity : Not available.

Other information

Voltage : 12V
Electric capacity : 12Ah

Section 10 - Stability and Reactivity

Reactivity : No data available.
Chemical stability : Stable.
Possibility of hazardous reactions : No data available.
Conditions to Avoid : Flames, sparks, and other sources of ignition, incompatible materials.
Incompatible materials : Oxidizing agents, acid base.
Hazardous decomposition products: Carbon monoxide, carbon dioxide.

Section 11 - Toxicological Information

Acute Toxicity:

CAS No.	LC50/LD50
12013-69-3	No data available.
9003-56-9	No data available.
65997-17-3	No data available.
7664-93-9	LD50 Rat (oral): 2140mg/kg

Skin irritation/corrosion : No data available.
Eye damage/irritation : No data available.
Respiratory or Skin sensitisation : No data available.
Reproductive Cell Mutagenicity : No data available.
Carcinogenicity : No data available.
Reproductive Toxicity : No data available.
Specific target organ toxicity-Single exposure : No data available.
Specific target organ toxicity-Repeated exposure : No data available.
Aspiration hazard : No data available.
Potential Health Effects : No data available.
Inhalation : No data available.
Skin contact : No data available.
Eye contact : No data available.
Ingestion : No data available.

Section 12 - Ecological Information

Ecological Toxicity

CAS# 7664-93-9

LC50 : 16-28mg/L- fishes (Bluegill)- 96h
Persistence and degradability : No data available.
Bioaccumulative Potential : No data available.
Mobility in Soil : No data available.
Other adverse effects : No data available.

Section 13 - Disposal Considerations

Disposal methods:

Recommendation : Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging

Recommendation : Disposal must be made according to official regulations.

Section 14 - Transport Information

UN Number

IATA, IMDG, Model Regulation : N/A

UN Proper shipping name

IATA, IMDG, Model Regulation : N/A

Transport hazard class(es)

IATA, IMDG, Model Regulation : Not Subjected for transport of dangerous goods

Packing group

IATA, IMDG, Model Regulation : N/A

Packaging Sign

IATA, IMDG, Model Regulation : N/A

Environmental hazards

Marine pollutant : No

Special precautions for user : No information available.

Transport information : VRLA Battery (ES12-12) has passed the Vibration test , Pressure differential test, Non-spillable test, according to the report ID: MLIJLPXW26937721. It is considered non-dangerous goods by the International Civil Aviation Organization (ICAO), the 59th version of International Air Transport Association (IATA), the International Maritime Dangerous Goods regulations (IMDG) (38-16), or ((Recommendations on the Transport of Dangerous Goods Model Regulations» (20th).

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

Transport Fashion : By air, by sea, by railway, by road.

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

CAS No.	TSCA	IECSC	DSL/NDL	EINECS/ ELINCS/ NLP
12013-69-3	Listed	Listed	Listed DSL	Listed
9003-56-9	Listed	Listed	Listed DSL	Listed
65997-17-3	Listed	Listed	Listed DSL	Listed
7664-93-9	Listed	Listed	Listed DSL	Listed

Section 16 - Other Information

Modification record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor

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any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other Information:

CAS: (Chemical Abstracts Service);

EC: (European Commission);

ACGIH: (American Conference of Governmental Industrial Hygienists);

NIOSH: (US National Institute for Occupational Safety and Health);

OSHA: (US Occupational Safety and Health);

TLV: (Threshold Limit Value)

TWA: (Time Weighted Average);

STEL: (Short Term Exposure Limit);

PEL: (Permissible Exposure Level);

REL: (Recommended Exposure Limit);

PC-STEL: (Permissible concentration-time weighted average);

PC-TWA: (Permissible concentration-short time exposure limit);

LC50: (Lethal concentration, 50 percent kill);

LD50: (Lethal dose, 50 percent kill);

IARC: (International Agency for Research on Cancer);

EC50: (Median effective concentration);

BCF: (Bioconcentration Factor);

BOD: (Biochemical oxygen demand);

NOEC: (No observed effect concentration);

NTP: (US National Toxicology Program);

RTECS: (Registry of Toxic Effects of Chemical Substances);

IATA: (International Air Transport Association);

IMDG: (International Maritime Dangerous Goods);

TOG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations);

TOC: (Total Organic Carbon);

TSCA: (Toxic Substances Control Act of USA);

DSL: (the Domestic Substances List of Canada);

NDSL: (the Non-domestic Substances List of Canada)

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