

Sealed Lead Acid Battery

Safety Data Sheet



Section 1. Identification of the material and the supplier

Product: **Sealed Lead Acid Battery (6020727503)**
Trade name and Synonyms: **Lead acid: CP, CGA, CGTA, FM, UPS, CL, CG, CT, CTA, HFS, EV Series**

| | | |
|-------------------------|--|---|
| ANZ Distributor: | Getinge Australia | Getinge Australia (NZ Branch) |
| Address | 11 Help Street Level 7, Suite 701 Chatswood NSW 2067 AUS | 600 Great South Road Building B, Level 2 Ellerslie, Auckland, 1051 NZ |
| Telephone | 1800 438 464 | 0800 1 438 4643 |

Emergency Telephone: **AUS +61 2 8014 4558**
NZ +64 9 929 1483 or **0800 764 766** (National Poison Centre)

Date of SDS Preparation: 13 June 2023

Section 2. Hazards Identification

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020 - This product is considered as a Manufactured Article.

Acute Hazards:

Do not open battery. Avoid contact with internal components_ Internal components include lead and absorbed electrolyte.

Electrolyte - Electrolyte is corrosive and contact may cause skin irritation and chemical burns
Electrolyte causes severe irritation and burns of eyes, nose and throat. Ingestion can cause severe burns and vomiting.

Lead - Direct skin or eye contact may cause local irritation. Inhalation or ingestion of lead dust or fumes may result in headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia and leg, arm and joint pain.

Chronic Health Effects:

Electrolyte - Repeated contact with electrolyte causes irritation and skin burns. Repeated exposure to mist may cause erosion of teeth, chronic eye irritation and/or chronic inflammation of the nose, throat and lungs.

Lead - Prolonged exposure may cause central nervous system damage, gastrointestinal disturbances, anemia, irritability, metallic taste, insomnia, wrist-drop, kidney dysfunction and reproductive system disturbances. Pregnant women should be protected from excessive exposure to prevent lead from crossing the placental barrier and causing infant neurological disorders.

Warning:

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to cause cancer and reproductive harm, and during charging, strong inorganic acid mists containing sulfuric acid are evolved. Wash hands after handling.

Medical Conditions Generally Aggravated by Exposure:

Contact with internal components if battery is broken or opened, then persons with the following medical conditions must take precautions: pulmonary edema, bronchitis, emphysema, dental erosion and tracheobronchitis.

Section 3. Composition / Information on Ingredients

| MATERIAL OR INGREDIENTS | Content (wt %) | CAS # |
|---|-----------------------|----------------|
| Lead/Lead Oxide (Litharge)/Lead Sulfate | 60-70 | 7439-92-1 |
| Calcium (lead calcium alloy) | <0.15 | 7440-70-2 |
| Tin | <1 | 7440-31-5 |
| Arsenic (inorganic) | <1 | 7440-38-2 |
| Sulfuric Acid (Battery Electrolyte) | 10-15 | 7664-93-9 |
| Inert Ingredients | <6 | Not applicable |

Section 4. First Aid Measures

Contact with internal components if battery is opened/broken.

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| If in Eyes | Rinse eyes with water for 15 minutes and seek medical attention. |
| If on Skin | Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary. |
| If Swallowed | Do not induce vomiting. If conscious drink large amounts of water/milk. Obtain medical attention. Never give anything by mouth to an unconscious person. |
| If Inhaled | Remove to fresh air and provide medical oxygen/CPR if needed. Obtain medical attention. |

Most important symptoms and effects, both acute and delayed

Symptoms: No effect under routine handling and use.

Section 5. Fire Fighting Measures

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| Hazard Type | Non Flammable. |
| Hazards from products | Sulfuric acid vapors are generated upon overcharge and polypropylene case failure. Use adequate ventilation. Avoid open flames/sparks/other sources of ignition near battery. Combustion can produce carbon dioxide and carbon monoxide. |
| Suitable Extinguishing media | Class ABC, CO ₂ , Halon |
| Precautions for firefighters and special protective clothing | Use NIOSH approved self-contained breathing apparatus (SCBA) and full protective equipment operated in positive-pressure mode. Lead acid batteries do not bum, or burn with difficulty. Do not use water on tires where molten metal is present. Extinguish Pre with agent suitable for surrounding combustible materials. Cool exterior of battery if exposed to fire to prevent rupture. The acid mist and vapors generated by heat or fire are corrosive. |
| HAZCHEM CODE | 2R |

Section 6. Accidental Release Measures

Wear Acid resistant aprons, boots and protective clothing. ANSI approved safety glasses with side shields/face shield recommended.

Avoid contact with any spilled material. Contain spill, isolate hazard area, and deny entry. Limit site access to emergency responders. Neutralize with sodium bicarbonate, soda ash, lime or other neutralizing agent. Place battery in suitable container for disposal. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

Lead and its compounds and sulfuric acid can pose a severe threat to the environment. Contamination of water, soil and air should be prevented.

Section 7. Handling and Storage

Precautions for Handling:

- GOOD PERSONAL HYGIENE AND WORK PRACTICES ARE MANDATORY.
- Refrain from eating, drinking or smoking in work areas.
- Thoroughly wash hands, face, neck and arms, before eating, drinking and smoking.
- Work clothes and equipment should remain in designated lead contaminated areas, and never taken home or laundered with personal clothing.
- Wash soiled clothing, work clothes and equipment before reuse.

Precautions for Storage:

- Store away from reactive materials, open flames and sources of ignition as craned in Section 10.
- Store batteries in cool, dry, well-ventilated areas.
- Batteries should be stored under roof for protection against adverse weather conditions.
- Avoid damage to containers.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

| Substance | TWA | | STEL | |
|--|-----|-------------------|------|-------------------|
| | ppm | mg/m ³ | ppm | mg/m ³ |
| Lead, inorganic dusts and fumes, as Pb [7439-92-1] | - | 0.05 | - | - |
| Tin, metal [7440-31-5] | - | 2 | - | - |
| Arsenic and soluble compounds, as As [7440-38-2] | - | 0.001 | - | - |
| Sulphuric acid [7664-93-9] | - | 0.1 | - | - |

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Store and handle in dry ventilated area.

Personal Protection Equipment:

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| Eyes | Safety glasses with side shields/face shield recommended |
| Hands | Wear rubber or plastic acid resistant gloves. |
| Respiratory | None required under normal conditions. Acid gas NIOSH approved respirator is required when the PEL is exceeded or employee experiences respiratory irritation. |

Section 9 Physical and Chemical Properties

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| Appearance | Battery: Co-polymer polypropylene, solid; may be contained |
|-------------------|--|

Product Name: **Sealed Lead Acid Battery**
Date of SDS: 13 June 2023

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

| | |
|---|---|
| | within an outer casing of aluminum or steel. Case has metal terminal. |
| Colour | Lead: Gray, metallic, solid; brown/grey oxide |
| Odour | Electrolyte: Odourless, liquid absorbed in glass mat material. |
| Odour Threshold | Not available |
| pH | Not available |
| Boiling Point | Not available |
| Melting Point | >160°C (polypropylene) |
| Freezing Point | Not available |
| Flash Point | Not available |
| Flammability | Not available |
| Upper and Lower Explosive Limits | Not available |
| Vapour Pressure | Not available |
| Vapour Density | Hydrogen: 0.059 (Air =1) Electrolyte: 3.4 @ STP (Air = 1) |
| Specific Gravity | 1250-1.320 pH r2 |
| Reactivity in Water | Electrolyte — Water Reactive (1) |
| Water Solubility | 100% soluble (electrolyte) |
| Partition Coefficient: | Not available |
| Auto-ignition Temperature | Not available |
| Viscosity | Not available |
| Particle Characteristics | Not available |

Section 10. Stability and Reactivity

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| Stability of Substance | This product is stable under normal conditions. |
| Possibility of hazardous reactions | None known. |
| Conditions to Avoid | Avoid overcharging and smoking, or sparks near battery surface. |
| Incompatible Materials | Sparks, open flames, keep battery away from strong oxidizers. |
| Hazardous Decomposition Products | High temperatures-cases decompose at >160°C. Combustion can produce carbon dioxide and carbon monoxide. |

Section 11 Toxicological Information

GENERAL: The primary routes of exposure to lead are ingestion or inhalation of dust and fumes.

ACUTE:

INHALATION/INGESTION: Exposure to lead and its compounds may cause headache, nausea, vomiting, abdominal spasms, fatigue, sleep disturbances, weight loss, anemia, and pain in the legs, arms and joints. Kidney damage, as well as anemia, can occur from acute exposure.

CHRONIC:

INHALATION/INGESTION: Prolonged exposure to lead and its compounds may produce many of the symptoms of short-term exposure and may also cause central nervous system damage, gastrointestinal disturbances, anemia, and wrist drop. Symptoms of central nervous system damage include fatigue, headaches, tremors, hypertension, hallucination, convulsions and delirium. Kidney dysfunction and possible injury has also been associated with chronic lead poisoning. Chronic over-exposure to lead has been implicated as a causative agent for the impairment of male and female reproductive capacity, but there is at present, no substantiation of the implication. Pregnant women should be protected from excessive exposure. Lead can cross the placental barrier and unborn children may suffer neurological damage or developmental problems due to excessive lead exposure in pregnant women.

Section 12. Ecotoxicological Information

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In most surface water and groundwater, lead forms compounds with anions such as hydroxides, carbonates, sulfates, and phosphates, and precipitates out of the water column. Lead may occur as sorbed ions or surface coatings on sediment mineral particles or may be carried in colloidal particles in surface water. Most lead is strongly retained in soil, resulting in little mobility. Lead may be immobilized by ion exchange with hydrous oxides or clays or by chelation with humic or fulvic acids in the soil. Lead (dissolved phase) is bioaccumulated by plants and animals, both aquatic and terrestrial.

Section 13. Disposal Considerations

Disposal Method:

Lead-acid batteries are completely recyclable. Return whole scrap batteries to distributor, manufacturer or lead smelter for recycling.

For neutralized spills, place residue in acid-resistant containers with sorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid and lead compounds. Contact local and/or state environmental officials regarding disposal information.

Disposal methods to avoid: None known.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

All Vision AGM, Gel batteries CG, CP, FM, CL series and CTA series are valve regulated lead acid (VRLA) batteries.

Vision's VRLA batteries have passed vibration, pressure differential and free flowing acid tests under CFR 49 173.159(d) and meet IATA Special Provisions A48 and A67. The batteries are securely packaged, protected from short circuits and labeled "Non-Spillable." Vision's VRLA batteries are exempt from DDT Hazardous Material Regulations and IATA Dangerous Goods Regulations.

Note: The shipper has the option of shipping the batteries Hazmat regulated under UN2800. Additional labeling and paperwork would be required. See CFR 49 and IATA Dangerous Goods Regulations for more information.

Road, Rail, Sea and Air Transport

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|-----------------------------|--|
| UN No | 2800 |
| Class - Primary | 8 |
| Packing Group | N/A |
| Proper Shipping Name | BATTERIES, WET, NON-SPILLABLE |
| Marine Pollutant | No |
| Special Provisions | If the product's individual container is below 1L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG. Special Provisions: 238 |

Section 15 Regulatory Information

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020 - This product is considered as a Manufactured Article.

Section 16 Other Information

Glossary

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| EC ₅₀ | Median effective concentration. |
| EEL | Environmental Exposure Limit. |
| EPA | Environmental Protection Authority |

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|------------------|---|
| HSNO | Hazardous Substances and New Organisms. |
| HSW | Health and Safety at Work. |
| LC ₅₀ | Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it. |
| LD ₅₀ | Lethal dose to kill 50% of test animals/organisms. |
| LEL | Lower explosive level. |
| OSHA | American Occupational Safety and Health Administration. |
| TEL | Tolerable Exposure Limit. |
| TLV | Threshold Limit Value-an exposure limit set by responsible authority. |
| UEL | Upper Explosive Level |
| WES | Workplace Exposure Limit |

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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