

MATERIAL SAFETY DATA SHEET

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COMPANY DETAILS:

Company: Challenge Batteries
Address: 1 Burgay Court, Osborne Park WA 6017
Telephone Number: +61 8 9446 6122
Emergency Number: Tony Herbert 0419 989 880

Hazardous according to criteria of Work Safe Australia.

IDENTIFICATION

Product Name: **Lead Acid Battery, Wet**
Other Names: Battery, Wet, Filled with Acid, Electric Storage.
Manufacturer's Product Code: Battery, Automotive
UN Number: 2794
Dangerous Goods Class: 8
Packing Group: III
Hazchem Code: 2W
Poison Schedule Number: S6
Use: Starting, Lighting, Ignition for Cars & Trucks etc.

Physical Description Properties

Appearance: Battery is a manufactured Article. Sulphuric acid electrolyte is a clear, mobile liquid.
Boiling/Melting Point (°C): (Sulphuric Acid Electrolyte) 95c / -7 to -70c
Vapour Pressure: (Sulphuric Acid Electrolyte) 13 to 22 mmHg @ 25c
Specific Gravity: (Sulphuric Acid Electrolyte) 1.2 to 1.3 @ 25c
Flashpoint: (Sulphuric Acid Electrolyte) Not Applicable
Flammability Limits (Sulphuric Acid Electrolyte) Not Applicable
Solubility in Water (Sulphuric Acid Electrolyte) 100%

Other Properties

Sulphuric Acid: Contact with combustible and organic material may cause fire or explosion. Also reacts violently with strong reducing agents, metals, sulphur trioxide gas, strong oxides and water. Contact with metals may produce toxic sulphur dioxide fumes and may release flammable hydrogen gas.
Lead compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganates, peroxides, nascent hydrogen and reducing agents.

Ingredients

| <u>Chemical Entity</u> | <u>CAS Number</u> | <u>Proportion by weight</u> |
|------------------------|-------------------|-----------------------------|
| Lead | 7439-92-1 | 30-60% |
| Sulphuric Acid | 7664-93-9 | 20-40% |
| Lead Dioxide | 1309-60-0 | 10-30% |

HEALTH HAZARD INFORMATION

Health Effects:

Acute Effects:

Swallowed: Sulphuric acid - Corrosive and causes severe burns. May cause severe irritation of the mouth, throat, oesophagus and stomach.
Lead compounds - Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhoea and severe cramping.
Eye: Sulphuric acid - Contamination of eye may result in permanent injury. Corrosive to eyes. Contact can cause corneal burns.
Lead compounds - May cause eye irritation
Skin: Sulphuric acid - Corrosive to skin. Contact with skin may cause burns.
Lead compounds - Not readily absorbed through skin
Inhaled: Sulphuric acid - Inhalation of mists or aerosols can cause mucous membrane or respiratory irritation. Exposure to high concentrations of the acid in liquid form or as a mist may lead to pulmonary oedema.
Lead compounds- Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

Chronic Effects: Possible erosion of tooth enamel, inflammation of the nose, throat and bronchial tubes evidence available indicates exposure to strong inorganic acid mists containing sulphuric acid is carcinogenic to humans⁽¹⁾.
⁽¹⁾World Health Organisation: IARC. Copy draft report "Acid Toxicology" File, Chem Prods NW Registry.

First Aid:

Swallowed: If conscious, immediately rinse mouth with water & give water to drink. DO NOT induce vomiting. Seek immediate medical assistance.
Eye: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
Skin: Remove contaminated clothing. Wash affected area with large amount of water. If swelling, redness, blistering or irritation develops seek immediate medical assistance. For skin burns, immediately flood burnt area with plenty of water and cover with a clean, dry dressing. Seek immediate medical advice.

Inhaled: Remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured ensure airways are clear and administer oxygen. If breathing has stopped apply artificial respiration at once. Seek immediate medical assistance.

Advice to Doctor: Treat symptomatically and as for exposure to acidic corrosive substances.

PRECAUTIONS FOR USE

Exposure Standards: Workplace exposure standard for metallic lead is 0.15 mg/m³ in air
Workplace exposure standard for sulphuric acid is 1 mg/m³ in air

Engineering controls: Use only in well ventilated areas.

Work practises: Batteries are heavy, appropriate material handling equipment and techniques should be used. Handle batteries cautiously to avoid spills. Ensure vent caps are on securely. Avoid contact with internal components. Wear protective clothing when filling batteries as detailed below. Follow manufactures instructions for installation and service.

Personal protection: **Respirator type** - Not applicable under normal use
Glove type - When handling sulphuric acid, wear impervious PVC acid resistant gloves with elbow length gauntlet.
Eye protection - When handling sulphuric acid wear chemical goggles or face shield
Clothing - When handling batteries wear safety boots.

SAFE HANDLING INFORMATION

Storage and Transport:

Classified as a Class 8 Dangerous Goods by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Store away from organic and other combustible materials, oxidising agents and foodstuffs. Highly reactive towards metals in the presence of moisture, liberating hydrogen gas. Keep containers closed at all times. Keep dry- reacts with water which may lead to drum rupture. Use with great caution in mixing with water due to heat evolution that causes violent splattering.
ALWAYS ADD ACID TO WATER, NEVER THE REVERSE

Spills:

Slippery when wet. Wear proper protective equipment to prevent skin and eye contact and inhalation of mist. Contain using sand, earth, inert material or vermiculite. Carefully dilute with water (fine spray or fog) then neutralise with lime or soda ash. With a clean shovel, transfer spilled material into clean-labelled containers for disposal. Wash area down with excess water. Do not allow water to enter containers of acid as a violent reaction may occur.

Prevent from entering drains, sewers, streams or other bodies of water. If contamination of sewers or waterways has occurred, advise the local emergency services.

Disposal:

Dispose in accordance with federal, state or local regulations.
After dilution or neutralisation, normally suitable for disposal at approved land waste site.
Empty containers must be decontaminated.

Fire/Explosion Hazards:

Not considered to be a fire hazard. However if involved in a fire will emit toxic fumes including sulphuric acid fumes and sulphur dioxide. Reaction with certain metals will produce flammable hydrogen gas, which will burn if ignited. Heating may cause expansion or decomposition leading to violent rupture of containers. Fire fighters to wear self contained breathing apparatus and full protective clothing when fighting fire.

Extinguishing Media: Water fog (if unavailable water spray), foam, carbon dioxide or dry chemical powder.

Toxicity: No toxicity data available for the product, however for the component.

Sulphuric Acid (100%):

ORAL LD50 (rat): 2140 mg/kg
ORAL LC50 (rat): 510 mg/M³/2H

Environmental Impact: Avoid contaminating waterways.

Stability and Reactivity: Powerful oxidising agent. Can react explosively with organic materials. Highly corrosive to most metals in the presence of moisture. Mixes exothermically with water, which may cause violent splattering.

Hazard Category: Corrosive.

Risk Phrases: R35: Cause severe burns.

Safety Phrases:

S1/2: Keep locked up and out of reach of children.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S30: Never add water to this product.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

CONTACT POINT

Tony Herbert (HR Manager) Tel: +61 8 9446 6122 Mob: 0419 989 880