



Issue Date 31/01/2014

MATERIAL SAFETY DATA SHEET USED LEAD ACID BATTERIES

Section 1: IDENTIFICATION OF CHEMICAL PRODUCT and COMPANY

Product Name

BATTERIES, WET FILLED WITH ACID

Also Known As

Lead Acid Battery, Lead Acid Wet Cell Battery, Starting Battery, Car Battery, Motorcycle Battery, SLI Battery, Forklift Battery, Traction Battery

Correct Shipping Name

BATTERIES, WET FILLED WITH ACID, electric storage

Dangerous Goods Class

8

UN Number

2794

Hazchem Code

2W

Product Use

Power source for electric start motors for motor vehicles.

Charging Hazard: Completion of charging process includes evolution of highly flammable and explosive hydrogen gas which is readily detonated by an electric spark. No smoking or naked lights. Do not attach/detach metal clips or operate open switches during charging process because of arcing/sparking hazards. Overcharging to excess will result in boiling which may cause a generating of a corrosive acid mist.

SUPPLIERS DETAILS

Wide Bay Capricorn Battery Recyclers Pty Ltd
Shed C, Northside Industrial Park
96 Mt Perry Road, Bundaberg North Qld 4670
Telephone 07 4151 4600

Section 2: HAZARDOUS IDENTIFICATION

DANGEROUS GOODS, HAZARDOUS SUBSTANCE. Chemical Hazards relate to the contents of the battery.



Overturning or damage to the battery case may cause the corrosive acid contents to spill. Can cause burns to the skin upon contact.

RISK CODES AND PHASES

R20/22	Harmful if swallowed, in contact with skin
R23	Toxic by inhalation
R33	Danger cumulative effect
R35	Causes severe burns
R41	Risk of serious damage to eyes
R50/53	Very toxic to water organisms, can cause adverse long term effects to the aquatic environment
R61	May cause harm to the unborn child
R62	Possible risk of impaired fertility

SAFETY CODES AND PHASES

S01/02	Keep locked up and out of reach of children
S09	Keep container in a well-ventilated place
S24	Avoid contact with skin
S25/26	Avoid contact with eyes, rinse immediately and seek medical advice
S29	Do not empty into drains
S36	Wear suitable protective clothing
S37	Wear suitable gloves
S38	In case of insufficient ventilation, wear suitable respiratory equipment
S39	Wear eye/face protection
S45	In case of accident, consult a Doctor Immediately
S53	Avoid exposure – obtain special instructions before use
S60	This material and its container must be disposed of as hazardous waste

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
Lead	7439-92-1	45 - 60
Lead Dioxide	1309-60-0	15 - 25
Sulfuric Acid	7664-93-9	20 – 45

Section 4: First Aid Requirements

IF SWALLOWED:

Contact a Doctor or Poisons Information Centre for advice immediately.

If swallowed, DO NOT induce vomiting, ingest a glass of water and rinse mouth with water.

Observe the patient closely.

EYE CONTACT

Immediately hold eyes open and flush the eye continuously for at least 15 minutes with running water.



Ensure that complete irrigation of the eye by occasionally lifting the upper and lower eyelids keeping them away from the eye.

Removal of any type of contact lenses should only be undertaken by skilled personnel.

Transport to doctor or hospital without delay.

SKIN CONTACT

Immediately flush body and clothes with large amounts of water, using a safely shower where possible.

Quickly remove all contaminated clothing and footwear.

Wash the areas with water for about 15 minutes or until advised by the Poisons Information Centre.

Transport to hospital or doctor.

INHALATION

Remove from contaminated area.

Lay patient down, keeping warm and rested.

If the patient has false teeth or other prostheses, these should be removed, where possible, to prevent airway blockage prior to beginning first aid procedures.

If patient has shallow breathing or breathing has stopped, ensure the airways are clear and begin resuscitation using a demand valve resuscitator, bag valve mask device. Administer CPR if necessary.

Transport to doctor or hospital without delay.

Inhalation of vapours or mists or fumes may cause lung oedema.

Corrosive substances may cause lung damage including fluid in the lungs.

This reaction may be delayed up to 24 hours after the exposure. The affected patient will need complete rest preferably in a semi recumbent position and should be kept under medical supervision.

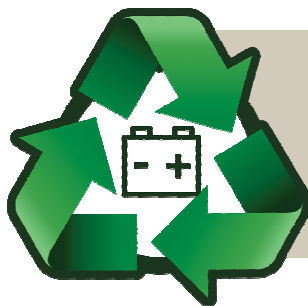
Before any symptoms manifest, a doctor or person authorized by a doctor may consider administering of a spray containing containing dexamethasone derivative or beclomethasone derivative.

NOTES TO ATTENDING DOCTOR

For acute or short term exposure to strong acids:

Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.

Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling.



Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.

Strong acids produce a coagulation necrosis characterized by formation of a coagulum (eschar) as a result of dissipating action of the acid on proteins in specific tissues.

INGESTION

Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.

Do not attempt to neutralize the acid since exothermic reaction may extend the corrosive injury.

Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.

Charcoal has no place in acid management.

Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN

Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.

Deep second-degree burns may benefit from topical silver sulfadiazine.

EYES

Eye Injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. Do not use neutralizing agents or any other additives. Several litres of saline are required.

Cycloplegic drops (1% cyclopentolate for short term use of 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.

Steroid eye drops should only be administered with the approval of a consulting ophthalmologist.

(Ellenhorn and Barceloux: Medical Toxicology).

Section 5: FIRE AND EXPLOSION MEASURES

Fire Fighting

Alert Fire Brigade and inform them of the location and nature of the hazard.

Wear full body protective clothing with breathing apparatus.



Prevent, by any means available, spillage from entering drains or water course.

Use firefighting procedures suitable for surrounding area.

Do not approach containers suspected to be hot.

Cool fire exposed containers with water spray from a protected location.

If safe to do so, remove containers from path of fire.

Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

Non Combustible and dangerous hazard with expose to flame, heat and oxidizers.

Not considered to be a significant fire risk.

May emit corrosive fumes.

Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.

Heating may cause expansion or decomposition leading to violent rupture of containers.

Section 6: ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

Check regularly for spills and leaks.

Clean up all spills immediately.

Avoid inhalation and contact with eyes and skin.

Use protective equipment to control personal contact.

Neutralize using soda ash or slaked lime, contain and absorb spill with sand, earth, inert material or vermiculite.

Wipe up and place items used in a container for waste disposal.

MAJOR SPILLS

Clear area of all personnel and move upwind.

Do not touch the spill material.

Alert Fire Brigade and tell them location and nature of hazard.

Prevent by all means available, spillage from entering drains or water course.

Wear full body protection with breathing apparatus.

Stop leak if safe to do so.

Contain spill with sand, earth or vermiculite.



Collect recoverable product into labelled containers for recycling.

Neutralize/decontaminate residue.

Collect solid residue and seal in labelled drums for disposal.

Wash area and prevent runoff into drains.

After cleanup operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

If contamination of drains and waterway occurs, advise emergency services.

Use soda ash or slaked lime to neutralize.

Do not use water or neutralizing agents indiscriminately on large spills.

Section 7: HANDLING AND STORAGE

HANDLING

Do not allow clothing wet with material to stay in contact with skin.

SUITABLE CONTAINER

Do Not use aluminium or galvanized containers.

Check regularly for leaks and spills.

Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

Protect from accidental short circuit.

Avoid storage with reducing agents.

STORAGE REQUIREMENTS

Do not store near acids or oxidizing agents.

Keep in a dry, cool, well-ventilated area.

Store in original containers.

No smoking, naked lights or ignition sources.

Store away from incompatible materials and foodstuff containers.

Protect containers against physical damage, checking regularly for leaks.

Observe manufacturers storage and handling recommendations.



Store away from Incompatible materials such as reducing agents, sulphur trioxide gas and strong oxidizer.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Health effects relate to the corrosive sulfuric acid battery contents.

If Swallowed

This is regarded unlikely in commercial and industrial environments. The liquid causes great discomfort and corrosive is swallowed. It is capable of causing burns to mouth, throat, esophagus, with extreme discomfort and pain. Swallowing the liquid can also result in nausea, abdominal irritation, pain and vomiting.

PERSONAL PROTECTION

EYES

Safety glasses with unperforated side shields may be used where continuous eye protection is desirable. The liquid is extremely discomforting and direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. The material may produce severe irritation to the eye causing pronounced inflammation.

SKIN

The liquid is highly discomforting and corrosive to the skin and contact may cause chemical burns. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood stream through cuts, abrasions or lesions, may produce systemic injury with harmful effects.

INHALED

The vapour or mist is highly discomforting and corrosive to the upper respiratory tract, with coughing, choking and mucous membrane damage if inhaled.

There may be dizziness, headache, nausea and weakness. Swelling of the lungs can occur, either immediately or after a delay. Symptoms of this include chest tightness, shortness of breath, frothy phlegm and cyanosis.

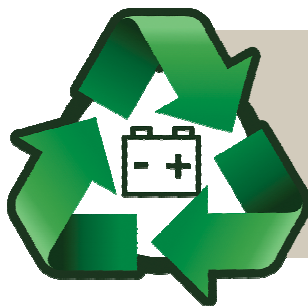
CHRONIC HEALTH EFFECTS

Substance accumulation, in the human body, is likely and may cause some concern following repeated or long term occupational exposure.

Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and or ulceration of mouth lining. Irritation of airways to lung, with cough and inflammation of lung tissue often occurs.

Ample evidence exists that developmental disorders are directly caused by human exposure to the material.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES



APPEARANCE

Rectangular plastic casing with exposed terminals for electrical connections. High weight to volume to ratio.

PHYSICAL PROPERTIES

Corrosive, acid.

Material	% by Weight	CAS Number	Exposure OSHA	Limits ACGIH
Lead	51.4	7439-92-1	0.05mg/m3	0.15mg/m3
Electrolyte (Sulfuric Acid)	19-44	7664-93-9	1mg/m3	1mg/m3
Lead Dioxide (PbO ₂)	20.8	1309-60-0	0.05mg/m3	0.05mg/m3
Non –Hazardous Ingredients	8.2			

Section 10: STABILITY AND REACTIVITY DATA

Conditions Contributing To Instability

Contact with alkaline material liberates heat.

If battery acid is heated to above 340oC, sulfuric acid may decompose to sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide and hydrogen.

Section 11: TOXICOLOGY PROPERTIES

Exposure Limits:	Blood lead levels above 50ppm is considered at risk.
Inhalation:	May cause irritation
Skin Contact:	May cause rash or irritation.
Eye Contact:	May cause eye damage.
Ingestion:	May cause irritation or burning.
Chronic Effects:	Electrolyte – Battery Acid – and lead are poisonous.
Carcinogenicity:	Lead and lead dioxide are listed as carcinogens. There is little or no possibility for exposure under normal conditions of use.
Other Reproductive Effects:	Long term exposure to high Blood Lead Levels may cause birth defects.
Sensitization to Material:	Product is not known to cause allergies.

Section 12: ECOLOGICAL INFORMATION

Lead, Sulfuric Acid, Lead Dioxide: Do Not discharge into sewer or waterways.

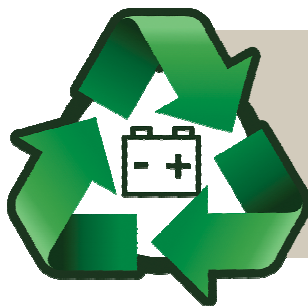
Lead, Lead Dioxide:

Lead is assessed as low hazard if it remains in its solid, massive, metallic form. Lead in the form of alkyls has been introduced to the environment primarily from leaded petrol.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Sulfuric Acid:

Prevent by any means spillage from entering drains or water courses.



Large discharges of sulfuric acid may contribute to the acidification of water and be fatal to aquatic life and soil microorganisms. The substance will react violently with a variety of other chemicals as well as water. Sulfuric acid is soluble in water and remains indefinitely in the environment as sulfate.

Section 13: DISPOSAL CONSIDERATIONS

Recycle wherever possible.

Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Do not discharge into sewers or water ways.

Use soda ash or slaked lime to neutralize.

Section 14: TRANSPORT INFORMATION

Labels Required - Corrosive

Hazchem: 2R (ADG7)

ADG7:

Class	8
UN Number	2794
Packaging Group	3

Name and Description: BATTERIES, WET, FILLED WITH ACID, electric storage

Section 15: REGULATORY INFORMATION

End of MSDS