SAFETY DATA SHEET

LEAD ACID BATTERY, WET FILLED WITH ACID

Document No. SSB-SDS-03, Version 1.3

1. IDENTIFICATION

Product Name:	SSB Batteries, Super Start Batteries, Fusion Traction
Other Name:	Lead Acid, Maintenance Free, Conventional, Flooded, Traction Batteries, Material Handling Batteries.
Proper Shipping Name:	Batteries, Wet, Filled with Acid
Use:	Starting, Lighting, Igniting, Motive Power Industrial Standby Power

Details of the supplier of the product

Company:	Super Start Batteries Pty Ltd (A.C.N. 101 683 694)
Address:	Unit 30 / 76 Hume Highway LANSVALE NSW 2166
Telephone Number:	(02) 9755 7851
Fax Number:	(02) 9755 7852
Email:	batteries@superstart.com.au
Website:	https://superstart.com.au/
Emergency Number:	1300 558 521

2. HAZARD INFORMATION

WHS and ADG Hazard Classification:
Hazardous Chemical, Dangerous Goods

Poisons Schedule:
Not Applicable

GHS Classification:
Metal Corrosion Category 1
Chronic Aquatic Hazard Category 1
Serious Eye Damage Category 1
Skin Corrosion/Irritation Category 1A
Reproductive Toxicity Category 1A
Carcinogen Category 1A
Acute Toxicity (Inhalation) Category 3
Acute Toxicity (Oral) Category 4

GHS Label Elements:

Signal Word:
DANGER

Hazard statements:

H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage

H335	May cause respiratory irritation
H351	May cause cancer
H360	May damage fertility or the unborn child
H362	May cause harm to breast-fed children
H372	May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention:

P201	Obtain instructions prior to use
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P263	Avoid contact during pregnancy/while nursing
P270	Do not eat, drink or smoke when using this product
P281	Use personal protective equipment as required

Precautionary Statements - Response:

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician/doctor
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P363	Wash contaminated clothing before reuse.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Precautionary Statements - Storage:

P405	Store locked up

Precautionary Statements - Disposal:

P501	Dispose of contents/container to an approved waste disposal facility in accordance with local regulations/laws

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	Weight %	CAS Number
Lead	35%-60%	7439-92-1
Lead Dioxide	12%-30%	1309-60-0
Calcium	<0.1%	7440-70-2
Sulphuric Acid	~20%	7664-93-9
Polyethylene Separator	~ 5%	9002-88-4
Case Material: Polypropylene (PP)	~5%	9003-07-0

4. FIRST AID MEASURES

In all circumstances, evacuate personnel from contaminated area and provide maximum ventilation to clear out fumes and pungent odours.

Immediate medical attention is always advised.

First Aid Measures:

Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing with plenty of water (eyelids-held open) for at least 15 minutes. Consult a physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Flush affected areas with plenty of water and soap for at least 15 minutes. Wash contaminated clothing before reuse. If Irritation develops seek medical attention.
Ingestion:	Immediately call a POISON CENTER. Seek urgent medical attention Do NOT induce vomiting Rinse mouth. Dilute by giving water or milk Assure that mucus does not obstruct the airway Do not give anything by mouth to an unconscious person
Inhalation:	Remove to fresh air immediately and keep at rest in a position comfortable for breathing Give oxygen or artificial respiration if needed Ventilate the contaminated area

Chronic Health Hazards:

Sulphuric acid:	Possible scarring of the cornea, inflammation of the nose, throat and bronchial tubes, possible erosion of tooth enamel.
Lead Compounds:	May cause anaemia, damage to kidneys and nervous system, and damage to reproductive system in both males and females.

Medical Conditions Generally Aggravated by Exposure:
Inorganic lead and its compounds can aggravate chronic forms of kidney, liver, and neurological diseases. Contact of battery electrolyte (acid) with the skin may aggravate skin diseases such as eczema and contact dermatitis. Overexposure to sulphuric acid mist may cause lung damage and aggravate pulmonary conditions.

5. FIRE FIGHTING MEASURES

Fire and explosion hazard:	Non-combustible. Not considered to be a significant fire risk. 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.
Extinguishing media:	Suitable: Water Spray or Fog Dry chemical Powder Foam BCF Unsuitable: Carbon Dioxide
Advice for Fire Fighters:	Alert Fire brigade to the nature of the hazard and location Cool fire exposed containers with water spray from a protected location If safe to do so, remove containers from path of fire Use water delivered as a fine spray to control fire and cool adjacent area Prevent spillage from entering drains or water ways Do not approach containers suspected to be hot Slight hazard when exposed to flames and oxidisers Use fire fighting procedures suitable for surrounding area
Special protective equipment:	Use self-contained breathing apparatus to avoid breathing irritant fumes. Wear full protective gear and equipment Equipment should be thoroughly decontaminated after use
HAZCHEM	2R

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment as required.

Environmental Precautions: Prevent spillages from entering soils, waterways, drains or any natural environment or ecosystems.

Methods for Containment & Clean-Up: Absorb spills with dry sand, earth, saw dust, or vermiculite. It is important to act quickly to stop the flow of hazardous material. Use a spill kit if one is available. Transfer spilled material into a clearly labeled container for disposal. Wash area with hot water and soap.

7. HANDLING AND STORAGE

The batteries should not be opened destroyed or incinerated since they may leak or rupture and release in the environment the ingredients they contain.

Handling: Do not crush, pierce, short (+) and (-) battery terminals with conductive (i.e. metal) material. Do not directly heat or solder. Do not throw into fire. Do not mix batteries of different types and brands. Do not mix new and used batteries. Keep batteries in non- conductive (i.e. plastic) trays.

Storage: Store in a cool (preferably below 30°C) and ventilated area away from moisture, sources of heat, open flames, food and drink. Keep adequate clearance between walls and batteries. Temperature above 90°C may result in battery leakage and rupture. Since short circuit can cause burn, leakage and rupture hazard, keep batteries in original packaging until use and do not jumble them.

Other: Manufacturer recommendations regarding maximum recommended currents and operating temperature range. Applying pressure or deforming the battery may lead to disassembly followed by eye, skin and throat irritation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Material Name	Air Exposure Limits (µg/m$^{3)}$			LD50 ORAL (mg/kg)
	ACGIH TLV	OSHA	NIOSH	
Lead	150	50	10	500
Tin	2000	2000	--	--
Sulfuric Acid	1000	1000	1000	2.14

Engineering Controls:
Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid resistant.

Personal Protection and Equipment:
None needed under normal conditions. However, if battery case is damaged:

- Protective gloves: use rubber or plastic acid-resistant gloves with elbow-length gauntlet.
- Eye protection: use chemical goggles or face shield.
- Other protection: Acid-resistant apron. Under severe exposure or emergency conditions, wear acid –resistant clothing and boots.
- In areas where sulphuric acid is handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

9. PHYSICAL & CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	Solid containing liquid
Appearance:	Rectangular plastic casing with exposed terminals for electrical connections
Odour:	No data
Odour Threshold:	No data
Colour:	Clear
pH:	No data
Melting point/freezing point:	-7 to -70°C
Boiling point / boiling range:	95°C - 95.555°C
Flash point:	No data
Evaporation rate:	No data
Flammability (solid, gas):	No data
Flammability Limit in Air:	No data
Upper flammability limit:	No data
Lower flammability limit:	No data
Vapour pressure:	13 to 22 mmHg @ 25°C
Vapour density:	1
Specific Gravity:	1.2 to 1.3 @ 25°C
Water solubility:	100%
Solubility in other solvents:	No data
Partition coefficient:	No data
Autoignition temperature:	No data
Decomposition temperature:	No data
Kinematic viscosity:	No data
Dynamic viscosity:	No data
Explosive properties:	No data
Oxidizing properties:	No data

Other Information

Softening Point:	No data
Molecular Weight:	No data
VOC Content (%):	No data
Density:	75.8523-
Bulk Density:	No data

10. STABILITY AND REACTIVITY

Reactivity:
Not reactive under normal conditions

Chemical stability:
Stable at normal temperatures and pressures

Possibility of Hazardous Reactions:
None under normal processing

Hazardous polymerization:
Hazardous polymerization does not occur.

Conditions to avoid:
Prolonged overcharge
Sources of ignition
Keep out of reach of children

Incompatible materials:
Sulphuric acid: Contact with combustible and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulphur trioxide, strong oxidizers and water. Contact with metals

may product toxic sulphur dioxide fumes and may release flammable hydrogen gas.

Lead compounds: Avoid contact with strong bases, acids, combustible organic materials, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, reducing agents, and water.

Hazardous Decomposition Products:
Lead compounds exposed to high temperatures will likely produce toxic metal fume, vapour or dust; contact with strong acid/base or presence of nascent hydrogen may generate highly toxic arsine gas.

Sulfuric acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen

11. TOXILOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation:	(Acute): Under normal conditions of use, no health effects are expected. Contents of an open battery can cause respiratory irritation. (Chronic): Repeated and prolonged exposure may cause irritation.
Eye contact	(Acute): Under normal conditions of use, no health effects are expected. Exposure to dust may cause irritation. (Chronic): No data available.
Skin Contact	(Acute): Under normal conditions of use, no health effects are expected. (Chronic): No data available.
Ingestion	(Acute): Under normal conditions of use, no health effects are expected. Lead ingestion may cause abdominal pain, nausea, vomiting, diarrhoea and severe cramping. (Chronic): No data available.

Acute Effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Arsenic 7440-38-2	= 15 mg/kg (Rat) = 763 mg/kg (Rat)	-	-
Sulfuric Acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 510 mg/m^3 (Rat) 2 h
Tin 7440-31-5	= 700 mg/kg (Rat)	-	-

Information on toxicological effects
Symptoms
Symptoms of lead toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability. Lead absorption may cause nausea, weight loss, abdominal spasms, and pain in arms, legs and joints. Effects of chronic lead exposure may include central nervous system (CNS) damage, kidney dysfunction, anaemia, neuropathy particularly of the motor nerves with wrist drop, and potential reproductive effects.
Acute exposure to sulfuric acid causes severe irritation, burns and permanent tissue damage to all routes of exposure. Chronic exposure to sulfuric acid may cause erosion of tooth enamel, inflammation of nose, throat and respiratory system.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.
Irritation	Severe burns.
Corrosively	Not available.
Sensitization	Not available.

Carcinogenicity Chemical Name	ACGIH	IARC	NTP	OSHA
Arsenic 7440-38-2	A1	Group 1	Known	X
Sulfuric Acid 7664-93-9	A2	Group 1	–	X
Powdered Lead 7439-92-1	A3	Group 2A	Reasonably Anticipated	X

12. ECOLOGICAL INFORMATION

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sulfuric Acid 7664-93-9	–	500: 96 h Brachydanio rerio mg/L LC50 static	–	29: 24 h Daphnia magna mg/L EC50
Powdered Lead 7439-92-1	–	0.44: 96 h Cyprinus carpio mg/L LC50 semi-static 1.32: 96 h Oncorhynchus mykiss mg/L LC50 static 1.17: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	–	600: 48 h water flea µg/L EC50

Persistence and degradability
Lead is persistent in soils and sediments

Bioaccumulation
Not available

Mobility
Not available

Other adverse effects
Not available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging: Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Labels Required:

Marine Pollutant: No
Hazchem: 2R

ADG

UN Number:	2794
Proper shipping name:	BATTERIES, WET, FILLED WITH ACID
Hazard Class:	8
Packing Group:	Not Applicable
Environmental Hazard:	Not Applicable
Special Provisions:	295

ICAO / IATA

UN Number:	2794
Proper shipping name:	BATTERIES, WET, FILLED WITH ACID
Hazard Class:	8
ERG Code:	8L
Packing Group:	Not Applicable
Environmental Hazard:	Not Applicable
Special Provisions:	A51, A164, A183, A802
Cargo Only Packing:	870 – No Limit
Passenger Packing:	870 – 30kg

IMDG

UN Number:	2794
Proper shipping name:	BATTERIES, WET, FILLED WITH ACID
Hazard Class:	8
Packing Group:	Not Applicable
Environmental Hazard:	Not Applicable
EmS:	F-A, S-B
Special Provision:	295

15. REGULATORY INFORMATION

The regulations following are specifically applied to the safe usage, production, storage, transport and load and unload for dangerous chemicals.

- IATA Lithium Battery Guidance Document (2021)
- International Maritime Organization (IMO) International Maritime Dangerous Goods (IMDG) Code, 2022 Edition (inc. Amendment 41-22)
- SafeWork Australia Workplace Exposure Standards for Airborne Contaminants (19 December 2019)

Batteries are exempt from The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

CONTACT INFORMATION

Australian Poisons Information Centre (24 Hour Service)
Telephone: 13 11 26

Police or Fire Brigade (24 Hours)
Telephone: 000

Ambulance (24 Hours)
Telephone: 000

16. ADDITIONAL INFORMATION

Version 1.3 Revision Date: 27th June 2024

Version 1.1 Initial Date: 1st December 2015

Disclaimer:
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