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Issue Date: 06/01/2018, SDS # 008, Version #: 01

### 1. IDENTIFICATION

GHS PRODUCT IDENTIFIER: Storage Battery, Wet	<b>Distributor:</b> Ryde Batteries Wholesale Pty Ltd
	<b>A.B.N.</b> : 47 003 949 531
	Primary Addresses:
Product Use: Rechargeable Electrical Storage	Unit G, 10-16 South Street, Rydalmere, NSW, 2116
General Info: 1300 133 980 (M-F, 8AM-5PM)	EMERGENCY TELEPHONE NUMBER:
	Chemwatch 1800 039 008 (Australia)
Recommended use of the chemical and restrictions	on use
Electric Storage Battery	

UN NUMBER :	UN2794	CAS NUMBER :	See Section 3
HAZCHEM Code :	2X	POISONS SCHEDULE No. :	6
DANGEROUS GOODS CLASS:	Class 8	PACKAGING GROUP:	III

NOTE: The Powersports battery is considered an article as defined by 29 CFR 1910.1200 (OSHA Hazard Communication Standard). The information contained in this SDS is supplied at the customer's request for information only.

## 2. GHS HAZARD(S) IDENTIFICATION

Health		Environmental	Physical
Acute Toxicity (Oral, dermal, inhalation)	Category 4		
Skin corrosion / irritation	Category 1A		
Eye Damage	Category 1		
Reproductive	Category 1A	Aquatic Chronic 1	Explosive Chemical, Division 1.3
Carcinogenicity (lead)	Category 1B	Aquatic Acute 1	
Carcinogenicity (acid mist)	Category 1A		
Specific target organ toxicity (repeated exposure)	Category 2		

### **GHS Label Elements:**

Health	Environmental	Physical
	***	

## **Hazard Statements**

### DANGER!

- Causes severe skin.
- Causes serious eye damage.
- May damage fertility or the unborn child if ingested or inhaled.
- May cause cancer if ingested or inhaled.
- Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure.
- May form explosive air / gas mixture during charging.
- Extremely flammable gas (hydrogen).
- Explosive, fire, blast or projection hazard.

## **Precautionary Statements**

- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves / protective clothing, eye protection / face protection.
- Avoid breathing dust / fume / gas / mist / vapors / spray.
- Use only outdoors or in a well-ventilated area.
- Causes skin irritation, serious eye damage.
- Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid.
- Irritating to eyes, respiratory system, and skin.

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## 3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (Chemical / Common Names)	CAS Number	% by Weight
Inorganic Lead / Lead Compounds	7439-92-1	60-85
Electrolyte (H <sub>2</sub> SO <sub>4</sub> / H <sub>2</sub> O)	7664-93-9	10-28
Antimony	7440-36-0	<0.5
Tin	7440-31-5	<0.01
Arsenic	7440-38-2	<0.01
Calcium	7440-70-2	<0.01
Polypropylene	9003-07-0	3-10

Composition Comments: All concentrations are in percent by weight.

### 4. FIRST AID MEASURES

Note: Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (acid) and lead for exposures that may occur during battery production or container breakage or under extreme heat conditions such as fire.

Inhalation	<u>Sulfuric Acid:</u>
	Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult,
	give oxygen. Consult a physician.
	• <u>Lead:</u>
	Remove from exposure, gargle, wash nose and lips; consult physician.
Skin contact	• <u>Sulfuric Acid:</u>
	Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely,
	including shoes. If symptoms persist, seek medical attention.
	• <u>Lead:</u>
	Wash immediately with soap and water.
Eye contact	Sulfuric Acid and Lead:
	Flush immediately with large amounts of water for at least 15 minutes while lifting lids; Seek
	immediate medical attention if eyes have been exposed directly to acid.
Ingestion	• <u>Sulfuric Acid:</u>
	Give large quantities of water; Do NOT induce vomiting or aspiration into the lungs may occur and
	can cause permanent injury or death; consult physician.
	• <u>Lead:</u>
	Consult physician immediately.

## 5. FIRE FIGHTING MEASURES

Flash Point	Not applicable unless individual components exposed.			
Auto ignition Temperature	No data available.			
Flammable Limits	LEL = 4.1% (Hydrogen Gas in air); UEL = 74.2%			
Extinguishing Media	CO2; foam; dry chemical. Do not use carbon dioxide directly on cells. Avoid			
	breathing vapors. Use appropriate media for surrounding fire.			
Unsuitable Extinguishing Media	Water			
Special Fire Fighting Procedures	Use positive pressure, self-contained breathing apparatus. Beware of acid			
	splatter during water application and wear acid-resistant clothing, gloves, face			
	and eye protection. If batteries are on charge, shut off power to the charging			
	equipment, but note that strings of series connected batteries may still pose risk			
	of electric shock even when charging equipment is shut down.			

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Unusual Fire and Explosion Hazard	Highly flammable hydrogen gas is generated during charging and operation of	
	batteries. If ignited by burning cigarette, naked flame or spark, may cause	
	battery explosion with dispersion of casing fragments and corrosive liquid	
	electrolyte. Carefully follow manufacturer's instructions for installation and	
	service. Keep away all sources of gas ignition and do not allow metallic articles	
	to simultaneously contact the negative and positive terminals of a battery.	
	Follow manufacturer's instructions for installation and service.	

## 6. ACCIDENTAL RELEASE MEASURES

Protective Measures to be Taken if	Stop flow of material, contain / absorb small spills with dry sand, earth, and
Material is Released or Spilled	vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled acid with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer. Acid must be managed in accordance with approved local, state, and federal requirements. Consult state environmental agency and / or federal EPA.
Waste Disposal Method	Dispose of as a hazardous waste. Dispose of in accordance with applicable local,
	state and federal regulations.

## 7. HANDLING AND STORAGE

Handling	Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. Handle carefully and avoid tipping, which may allow electrolyte leakage. There may be increasing risk of electric shock from strings of connected batteries. Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Keep vent caps on and cover terminals to prevent short circuits. Place cardboard between layers of stacked automotive batteries to avoid damage and short circuits. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water. Use banding or stretch wrap to secure items for shipping.
Storage	Store frost-free under roof; prevent short circuits. Do not store in sealed, unventilated areas. Seek agreement with local water authorities in case of larger quantities. Avoid overheating and charging. Do not use organic solvents or anything other than manufacturers recommended cleaners on the batteries. If batteries have to be stored in storage rooms, it is imperative that the instructions for use are observed.
Charging	There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged may generate and release flammable hydrogen gas. Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.
Other	Follow Manufacturers Recommendations regarding maximum recommended currents and operating temperature range. Do not overcharge beyond the recommended upper charging voltage limit. Applying pressure or deforming the battery may lead to disassembly followed by eye, skin and throat irritation.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Occupational exposure limits (mg/m³)

Ingredients	CAS Number	OSHA PEL	ACGIH	US NIOSH	Quebec PEV	Ontario OEL	EU OEL
Lead, inorganic	7439-92-1	0.05	0.05	0.05	0.05	0.05	0.15 (b)
Antimony	7440-36-0	0.5	0.5	0.5	0.5	0.5	0.5 (b,c)
Tin	7440-31-5	2	2	2	i	-	-
Copper	7440-50-8	1	1	1	1	1 (a)	0.1 (d)
Arsenic	7440-38-2	0.01	0.01	0.01	i	-	-
Polypropylene	9003-07-0	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.
Electrolyte (H <sub>2</sub> SO <sub>4</sub> / H <sub>2</sub> O)	7664-93-9	1	0.2	1	1	0.2	0.05 (e)

### NOTES:

- (a) As dust/mists
- (b) As inhalable aerosol
- (c) Based on OEL's of Austria, Belgium, Denmark, France, Netherlands, Switzerland, & UK
- (d) Based on OEL of Netherlands
- (e) Thoracic fraction

### • OSHA:

Lead - US OSHA Specifically Regulated Substances (29 CFR 1910.1001 – 1050) Sulfuric Acid - US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

- ACGIH: US ACGIH Threshold Limit Values
- NIOSH: US NIOSH Pocket Guide to Chemical Hazards

## **Biological limit values**

**ACGIH:** ACGIH Biological Exposure Indices

Ingredient	ACGIH	Determinant	Specimen
Lead	300 μg/l	Lead	Blood

### **Exposure Guidelines:**

The OELs listed above are only applicable if the internal components of the battery cell are released. Follow standard monitoring procedures.

<b>Engineering Controls</b>	Store AGM Maintenance Free and Conventional Powersports Batteries at ambient	
(Ventilation)	temperature. Never recharge batteries in an unventilated, enclosed space. Do not subject	
	product to open flame or fire. Avoid conditions that could cause arcing between terminals.	
<b>Respiratory Protection</b>	NONE REQUIRED FOR NORMAL HANDLING OF THE FINISHED PRODUCT.	
(NIOSH / MSHA	When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or	
approved)	MSHA-approved respiratory protection.	
Skin Protection	NONE REQUIRED FOR NORMAL HANDLING OF THE FINISHED PRODUCT.	
	If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow-length	
	gauntlet, acid-resistant apron, clothing and boots.	
Eye Protection	NONE REQUIRED FOR NORMAL HANDLING OF THE FINISHED PRODUCT.	
	If necessary to handle damage product where exposure to the organic electrolyte is a	
	possibility, chemical splash goggles and a face shield are recommended.	
Other Protection	Safety footwear meeting the requirements of ANSI Z 41.1 is recommended when it is	
	necessary to handle the finished product.	

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General Hygiene	When using, do not eat, drink, or smoke. Wash hands after handling. Contaminated work
Considerations	clothing should not be allowed out of the workplace. Handle in accordance with good
	industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Odor Threshold  PH  Not applicable  Not applicable  Not applicable  Not applicable  Not applicable  Not applicable  Not applicable unless individual components exposed.  Battery Electrolyte (Acid) – 230 - 233.6 °F (110 - 112 °C)  Lead – 3180 °F (1749 °C)  Not applicable unless individual components exposed.  Flash Point  Not applicable unless individual components exposed.  Not applicable  Evaporation Rate (Butyl Acetate = 1)  Vapor Pressure (mm Hg @ 20 °C)  Upper / lower flammability or explosive limits  Hydrogen  Flammability Limit Lower – 4.1 %  Flammability Limit Upper – 74.2 %  Vapor Pressure  10.95 mm Hg (Sulfuric Acid)  Vapor Density  Relative Density  1.21 - 1.3 Battery Electrolyte (Acid)  Solubility  Lead and Lead dioxide are not soluble.  100 % Battery Electrolyte (Acid).			
PH Not applicable  Melting Point Lead – 621.32 °F (327.4 °C) Not applicable unless individual components exposed.  Boiling Point Battery Electrolyte (Acid) – 230 - 233.6 °F (110 - 112 °C) Lead – 3180 °F (1749 °C) Not applicable unless individual components exposed.  Flash Point Not applicable  Evaporation Rate (Butyl Acetate = 1) Not applicable  Evaporation Rate (Butyl Acetate = 1) Not applicable  Vapor Pressure (mm Hg @ 20 ° C) Battery Electrolyte (Acid) 11.7  Hydrogen Flammability Limit Lower – 4.1 % Flammability Limit Upper – 74.2 %  Vapor Pressure 10.95 mm Hg (Sulfuric Acid)  Vapor Density Not applicable  Relative Density 1.21 - 1.3 Battery Electrolyte (Acid)  Solubility Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).	Appearance and Odor	Manufactured article; no apparent odor.	
Melting Point  Lead – 621.32 °F (327.4 °C) Not applicable unless individual components exposed.  Battery Electrolyte (Acid) – 230 - 233.6 °F (110 - 112 °C) Lead – 3180 °F (1749 °C) Not applicable unless individual components exposed.  Flash Point  Not applicable  Evaporation Rate (Butyl Acetate = 1) Vapor Pressure (mm Hg @ 20 ° C)  Upper / lower flammability or explosive limits  Hydrogen  Flammability Limit Lower – 4.1 % Flammability Limit Upper – 74.2 %  Vapor Pressure  10.95 mm Hg (Sulfuric Acid)  Vapor Density  Relative Density  1.21 - 1.3 Battery Electrolyte (Acid)  Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).	Odor Threshold	Not applicable	
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Boiling Point  Battery Electrolyte (Acid) – 230 - 233.6 °F (110 - 112 °C)  Lead – 3180 °F (1749 °C)  Not applicable unless individual components exposed.  Not applicable  Evaporation Rate (Butyl Acetate = 1)  Vapor Pressure (mm Hg @ 20 °C)  Upper / lower flammability or explosive limits  Wapor Pressure  10.95 mm Hg (Sulfuric Acid)  Vapor Density  Relative Density  Relative Density  Battery Electrolyte (Acid) 11.7  Hydrogen  Flammability Limit Lower – 4.1 % Flammability Limit Upper – 74.2 %  Not applicable  1.21 - 1.3 Battery Electrolyte (Acid)  Lead and Lead dioxide are not soluble.  100 % Battery Electrolyte (Acid).	Melting Point	Lead – 621.32 °F (327.4 °C)	
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Flash Point Evaporation Rate (Butyl Acetate = 1) Vapor Pressure (mm Hg @ 20 ° C) Battery Electrolyte (Acid) 11.7 Upper / lower flammability or explosive limits Hydrogen Flammability Limit Lower - 4.1 % Flammability Limit Upper - 74.2 %  Vapor Pressure 10.95 mm Hg (Sulfuric Acid) Vapor Density Not applicable Relative Density 1.21 - 1.3 Battery Electrolyte (Acid) Solubility Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).		Lead – 3180 °F (1749 °C)	
Evaporation Rate (Butyl Acetate = 1)  Vapor Pressure (mm Hg @ 20 ° C)  Upper / lower flammability or explosive limits  Hydrogen Flammability Limit Lower – 4.1 % Flammability Limit Upper – 74.2 %  Vapor Pressure  10.95 mm Hg (Sulfuric Acid)  Vapor Density Not applicable Relative Density  1.21 - 1.3 Battery Electrolyte (Acid)  Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).		Not applicable unless individual components exposed.	
Vapor Pressure (mm Hg @ 20 ° C)       Battery Electrolyte (Acid) 11.7         Upper / lower flammability or explosive limits       Hydrogen       Flammability Limit Lower – 4.1 % Flammability Limit Upper – 74.2 %         Vapor Pressure       10.95 mm Hg (Sulfuric Acid)         Vapor Density       Not applicable         Relative Density       1.21 - 1.3 Battery Electrolyte (Acid)         Solubility       Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).	Flash Point	Not applicable	
Upper / lower flammability or explosive limits     Hydrogen     Flammability Limit Lower – 4.1 % Flammability Limit Upper – 74.2 %       Vapor Pressure     10.95 mm Hg (Sulfuric Acid)       Vapor Density     Not applicable       Relative Density     1.21 - 1.3 Battery Electrolyte (Acid)       Solubility     Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).	Evaporation Rate (Butyl Acetate = 1)	Not applicable	
Hydrogen Flammability Limit Upper – 74.2 %  Vapor Pressure 10.95 mm Hg (Sulfuric Acid)  Vapor Density Not applicable  Relative Density 1.21 - 1.3 Battery Electrolyte (Acid)  Solubility Lead and Lead dioxide are not soluble. 100 % Battery Electrolyte (Acid).	Vapor Pressure (mm Hg @ 20 ° C)	Battery Electrolyte (Acid) 11.7	
Vapor Pressure  10.95 mm Hg (Sulfuric Acid)  Vapor Density  Relative Density  1.21 - 1.3 Battery Electrolyte (Acid)  Lead and Lead dioxide are not soluble.  100 % Battery Electrolyte (Acid).	Upper / lower flammability or explosive limits	Hydrogon Flammability Limit Lower – 4.1 %	
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Relative Density  1.21 - 1.3 Battery Electrolyte (Acid)  Solubility  Lead and Lead dioxide are not soluble.  100 % Battery Electrolyte (Acid).	Vapor Pressure	10.95 mm Hg (Sulfuric Acid)	
Solubility  Lead and Lead dioxide are not soluble.  100 % Battery Electrolyte (Acid).	Vapor Density	Not applicable	
100 % Battery Electrolyte (Acid).	Relative Density	1.21 - 1.3 Battery Electrolyte (Acid)	
	Solubility	Lead and Lead dioxide are not soluble.	
% Volatile by Weight  Not applicable upless individual components exposed		100 % Battery Electrolyte (Acid).	
Not applicable unless individual components exposed.	% Volatile by Weight	Not applicable unless individual components exposed.	
Partition coefficient (n-octanol / water)  Not applicable	Partition coefficient (n-octanol / water)	Not applicable	
Auto-ignition temperature Not applicable	Auto-ignition temperature	Not applicable	
Decomposition temperature Not applicable	Decomposition temperature	Not applicable	
Viscosity Not applicable	Viscosity	Not applicable	
<b>Density</b> 11.35 g/cm³ Lead	Density	11.35 g/cm³ Lead	

## 10. STABILITY AND REACTIVITY

Reactivity	This product is non-reactive under normal conditions or use, storage, and transport.	
Stability	The AGM Maintenance Free and Conventional Powersports batteries are considered stable.	
<b>Conditions to Avoid</b>	Sparks and other sources of ignition; high temperature; over charging.	
Incompatibility	• Acid:	
(materials to avoid)	Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.  • Lead compounds:  Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents.	
Hazardous	• Acid:	
Decomposition Products	Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide.  • Lead compounds:	
	Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.	
Hazardous Polymerization	Will not occur.	

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### 11. TOXICOLOGICAL INFORMATION

NOTE: Under normal conditions of use, this product does not present a health hazard. The following information is provided for organic electrolyte and lead exposure that may occur due to container breakage or under extreme conditions such as fire.

Organic electrolyte – reacts with moisture / water to produce hydrofluoric acid in trace quantities. Hydrofluoric acid is extremely corrosive and toxic. In severe exposures it acts as a systemic poison and causes severe burns. The reaction may be delayed. Any contact with this material, even minor, requires immediate medical attention.

### **ROUTES AND METHODS OF ENTRY**

Inhalation	• <u>Sulfuric Acid:</u>
	Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation.
	• <u>Lead Compounds:</u>
	Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.
Skin Contact	<u>Sulfuric Acid:</u>
	Severe irritation, burns and ulceration.
	• <u>Lead Compounds:</u>
	Not absorbed through the skin.
Skin Absorption	In the event of overcharging or damage to the unit, exposure to organic electrolyte solution / mist
	is possible. Extreme exposures to the organic electrolyte can be absorbed through the skin.
Eye Contact	• <u>Sulfuric Acid:</u>
	Severe irritation, burns, cornea damage, and blindness.
	• <u>Lead Compounds:</u>
	May cause eye irritation.
Ingestion	• Sulfuric Acid:
	May cause severe irritation of mouth, throat, esophagus and stomach.
	• <u>Lead Compounds:</u>
	Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping.
	This may lead rapidly to systemic toxicity and must be treated by a physician.

EXPOSURE IS NOT EXPECTED FOR PRODUCT UNDER NORMAL CONDITIONS OF USE.

### SIGNS AND SYMPTONS OF OVEREXPOSURE

Acute Effects	<u>Sulfuric Acid:</u>
	Severe skin irritation, damage to cornea, upper respiratory irritation.
	• <u>Lead Compounds:</u>
	Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.
Chronic Effects	<u>Sulfuric Acid:</u>
	Possible erosion of tooth enamel, inflammation of nose, throat & bronchial tubes.
	Lead Compounds:
	Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage;
	reproductive changes in males and females. Repeated exposure to lead and lead compounds in
	the workplace may result in nervous system toxicity. Some toxicologists report abnormal
	conduction velocities in persons with blood lead levels of 50 μg/100 ml or higher. Heavy lead
	exposure may result in central nervous system damage, encephalopathy and damage to the
	blood-forming (hematopoietic) tissues.

EXPOSURE IS NOT EXPECTED FOR PRODUCT UNDER NORMAL CONDITIONS OF USE.

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#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Overexposure to sulfuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of sulfuric acid with skin may aggravate diseases such as eczema and contact dermatitis. Lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases.

#### **ADDITIONAL HEALTH DATA**

All heavy metals, including the hazardous ingredients in this product, are taken into the body primarily by inhalation and ingestion. Most inhalation problems can be avoided by adequate precautions such as ventilation and respiratory protection covered in Section 8. Follow good personal hygiene to avoid inhalation and ingestion: wash hands, face, neck and arms thoroughly before eating, smoking or leaving the work site. Keep contaminated clothing out of non-contaminated areas, or wear cover clothing when in such areas. Restrict the use and presence of food, tobacco and cosmetics to non-contaminated areas. Work clothes and work equipment used in contaminated areas must remain in designated areas and never taken home or laundered with personal non-contaminated clothing. This product is intended for industrial use only and should be isolated from children and their environment.

The 19th Amendment to EC Directive 67/548/EEC classified lead compounds, but not lead in metal form, as possibly toxic to reproduction. Risk phrase 61: May cause harm to the unborn child, applies to lead compounds, especially soluble forms.

### **Toxicological Data**

Constituents	Lead (CAS 7439-92-1)	Sulfuric Acid (CAS 7664-93-9)
Species	Rat	Rat
Test Results	1050 ug/kg	2140 mg/kg
Acute oral toxicity	TDLo	LD50
Skin corrosion / irritation	Electrolyte: Causes severe skin burns	
Serious eye damage / eye irritation	Electrolyte: Causes severe eye damage	
Respiratory Sensitization	Not Classified	
Skin Sensitization	Not a skin sensitizer	
Germ Cell Mutagenicity	No data available	

### **CARCINOGENICITY**

Under normal handling and storage conditions, the exposure to carcinogenic components is not expected. Risk of adverse effects occurs only if the cell is mechanically, thermally, or electrically abused to the point of compromising the enclosure.

#### • Sulfuric Acid:

The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category I carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist.

### Lead Compounds:

Lead is listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present.

Carcinogenic Effects			
	CAS Number	IARC	NTP
Sulfuric acid	7664-93-9	Group 1-Carcinogenic	Not established
Lead	7439-92-1	Group 2B-Possibly carcinogenic to humans.	Reasonably anticipated to be human carcinogen

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• OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050 / 1200)

Not listed.

Reproductive toxicity	May damage fertility or the unborn child.
Specific target organ toxicity - single exposure	No data available.
pecific target organ toxicity - repeated exposure Lead: May cause damage to organs (blood, central nervou	
	system) through prolonged or repeated exposure.
Aspiration hazard	Not classified.

### 12. ECOLOGICAL INFORMATION

### • Environmental Fate

Lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little bioaccumulation occurs through the food chain. Most studies include lead compounds and not elemental lead.

#### Ecotoxicity

Very toxic to aquatic life with long lasting effects. However, no ecological impacts expected under normal use conditions.

Constituents	Inorganic Lead / Lead Compounds (CAS 7439-92-1)
Species	Rainbow trout, Donaldson trout (Oncorhynchus mykiss)
Test Results	1.17 mg/l, 96 hours
Aquatic	Fish LC50
Persistence and Degradability	No data available
Bioaccumulative potential	No data available
Additional Information	No known effects on stratospheric ozone depletion
	Volatile organic compounds: 0% (by Volume)
	Water Endangering Class (WGK): NA

### 13. DISPOSAL CONSIDERATIONS

Waste disposal method	Material should be recycled if possible. Lead-acid batteries are completely recyclable. Product can be recycled along with automotive (SLI) lead-acid batteries. Dispose waste and residues in accordance with applicable federal, state, and local regulations.
Hazardous waste code	D008: Lead
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or packaging may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. TRANSPORT INFORMATION

NOTE: Please refer to current shipping paper for most up to date shipping information, including exemptions and special circumstances.

United States DOT	Not regulated as dangerous goods per 49 CFR 173.159a
IATA	Please contact manufacturer for most current information
IMDG	Not regulated as dangerous goods per exception 238

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### 15. REGULATORY INFORMATION

This product is an article pursuant to 29 CFR 1910.1200 and as such is not subjected to the OSHA Hazard Communication Standard.

#### **TSCA**

Ingredients listed in the TSCA registry are lead, lead compounds, and sulfuric acid.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Lead (CAS 7439-92-1)	Reproductive toxicity
	Central nervous system
	Kidney
	Blood
	Acute toxicity

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Lead (CAS 7439-92-1)	LISTED
Sulfuric Acid (CAS 7664-93-9)	LISTED

### Superfund Amendment and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard – Yes
	Delayed Hazard – Yes
	Fire Hazard – Yes
	Pressure Hazard – Yes
	Reactivity Hazard – Yes

### **SARA 302 Extremely hazardous substance**

Chemical Name	CAS Number	Weight-%	Reportable Quantity	Threshold Planning Quantity
Sulfuric Acid	7664-93-9	30-40	1000 lb EPCRA RQ	1000 lb TPQ
Water	7732-18-5	60-70	Not Listed	Not Listed

### • Section 311 / 312 Hazard Categorization

EPCRA Section 312 Tier Two reporting is required for non-automotive batteries if sulfuric acid is present in quantities of 500 lbs. or more and / or if lead is present in quantities of 10,000 lbs. or more. For more information consult 40 CFR 370.10 and 40 CFR 370.40.

### • Section 313 EPCRA Toxic Substances

40 cfr section 372.38 (b) states: If a toxic chemical is present in an article at a covered facility, a person is not required to consider the quantity of the toxic chemical present in such article when determining whether an applicable threshold has been met under § 372.25, § 372.27, or § 372.28 or determining the amount of release to be reported under § 372.30. This exemption applies whether the person received the article from another person or the person produced the article. However, this exemption applies only to the quantity of the toxic chemical present in the article.

Chemical Name	CAS Number	% by Weight
Lead	7439-92-1	60-85

## **Other Federal Regulations**

Lead (CAS 7439-92-1)	Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Sulfuric Acid (CAS 7664-93-9)	Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

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### • Safe Drinking Water Act (SDWA)

Not regulated

• Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Sulfuric Acid (CAS 7664-93-9), 6552

• Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Sulfuric Acid (CAS 7664-93-9), 20 % WV

### • DEA Exempt Chemical Mixtures Code Number

Sulfuric Acid (CAS 7664-93-9), 6552

#### **US State Regulations**

	US Massachusetts RTK – Substance List
Lead (CAS 7439-92-1)	US New Jersey Worker and Community Right-to-know Act
Sulfuric Acid (CAS 7664-93-9)	US Pennsylvania Worker and Community Right-to-know Law
	US Rhode Island RTK

#### • US California Proposition 65

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. **Wash hands after handling.** 

### • US California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Chemical Name	CAS Number	% by Weight
Lead	7439-92-1	60-85
Sulfuric Acid	7664-93-9	10-28
Arsenic (as arsenic oxides)	7440-38-2	<0.01

#### **International Inventories**

Country(s) or Region	Inventory Name	On inventory (yes / no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

<sup>\*</sup> A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

### • Canadian Domestic Substance List (DSL)

All ingredients remaining in the finished product as distributed into commerce are included on the Domestic Substances List.

### **WHMIS Classifications**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Controlled Products Regulations.

### NPRI and Ontario Regulation 127/01

This product contains the following chemicals subject to the reporting requirements of Canada NPRI +/or Ont. Reg. 127/01:

Chemical Name	CAS Number	% by Weight
Lead	7439-92-1	60-85

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<sup>\*</sup> Battery companies not party to the 1999 consent judgment with Mateel Environmental Justice Foundation should include a Proposition 65 Warning that complies with the current version of Proposition 65.

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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### • European Inventory of Existing Commercial Chemical Substances (EINECS)

All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Commercial Chemical Substances.

REACH: Contains more than 0.1% lead monoxide. Lead Monoxide (CAS: 1317-36-8) is listed as a substance of very high concern (SVHC) under EU REACH regulation annex XIV.

European Communities (EC) Hazard Classification according to directives 67/548/EEC and 1999/45/EC.

R-Phrases	S-Phrases
23/25	1/2, 20/21, \$28

### 16. OTHER INFORMATION

Issue Date	06/01/2015
Revision Date	-
Version #	01
<b>Further information</b>	NFPA Hazard Scale:
	0 = Minimal
	1 = Slight
	2 = Moderate
	3 = Serious
	4 = Severe
NFPA ratings	3 2

### PREPARATION INFORMATION:

Prepared by Technical Officer, Ryde Batteries Wholesale Pty Ltd August 2016. Revised by Technical Officer, Ryde Batteries Wholesale Pty Ltd June 2017.

**DISCLAIMER:** This SDS is offered only for information. **Ryde Batteries Wholesale Pty Ltd** provides no warranties either expressed or implied and assumes no responsibility for accuracy or completeness of the data contained herein.

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