

Rolls

SAFETY DATA SHEET – LEAD ACID BATTERY, DRY

I. IDENTIFICATION

Product Identifier:

Lead acid battery, dry (without electrolyte)

Product Use:

Dry lead acid storage battery / electric storage battery

Manufacturer:

Surrette Battery Company Limited

Prepared By:

Surrette Battery Company Limited

Preparation Date:

August 26, 2015

Revision Date:

August 10, 2016

Supplier Name & Address:




Surrette Battery Company Limited
 PO Box 2020, 1 Station Road
 Springhill, Nova Scotia, Canada
 B0M 1X0

Tel: 902-597-3767

Emergency Phone #:

CANUTEC 1-613-996-6666

2. HAZARD IDENTIFICATION

HEALTH		ENVIRONMENTAL	PHYSICAL
 			
Acute Toxicity (Oral/Dermal/Inhalation)	Category 4	Aquatic Chronic I	Not Classified
Reproductive	Category 1A	Aquatic Acute I	
Carcinogenicity (lead compounds)	Category 1B		
Carcinogenicity (arsenic)	Category 1A		
Specific Target Organ Toxicity (repeated exposure)	Category 2		

HAZARD STATEMENTS

- DANGER!
- Harmful if swallowed, inhaled or in contact with skin
- May damage fertility or the unborn child if ingested or inhaled
- May cause harm to breast-fed children
- May cause cancer if ingested or inhaled
- May cause damage to central nervous system, blood and kidneys through prolonged or repeated exposure if ingested or inhaled

SIGNAL WORD: DANGER!

PRECAUTIONARY STATEMENTS

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Wash thoroughly after handling
- Do not eat, drink or smoke when using this product
- Avoid contact during pregnancy/while nursing
- Wear protective gloves/protective clothing, eye protection/face protection
- Do not breathe dust/fume/gas/mist/vapors/spray
- If swallowed or consumed: Call poison center / doctor immediately
- If on clothing or skin (or hair): Remove/take off immediately all contaminated clothing and wash it before reuse; Rinse skin (hair) with water/shower
- If inhaled: Remove person to fresh air and keep comfortable for breathing; Immediately call poison center or doctor
- Store locked up, in a well ventilated area, in accordance with local and national regulation
- Dispose of contents/container in accordance with local and national regulation
- Keep out of reach of children

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (CHEMICAL / COMMON NAME)	CAS #	% BY WEIGHT
Lead and Lead Compounds (Inorganic)	7439-92-1	92

4. FIRST-AID MEASURES

Inhalation:

Lead – remove from exposure, gargle, wash nose and lips; consult a doctor.

Ingestion:

Lead – Consult doctor immediately.

Skin:

Lead – Wash immediately with soap and water.

Eyes:

Lead – Flush immediately with large amounts of water for at least 20 minutes while lifting lids. Seek immediate medical attention if eye irritation persists.

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5. FIRE-FIGHTING MEASURES

Extinguishing Media/Agents – CO₂ (do not use directly on cells), foam, dry chemical and avoid breathing vapors; use appropriate media/agents for surrounding fire.

Fire Fighting Procedures:

Use positive pressure, self-contained breathing apparatus. If batteries are on charge, shut off power to the charging equipment. *note – strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down*

Hazardous Combustion products:

Inorganic lead compound is not a combustible material, nor will it explode under conditions of normal use. Molten metals produce fume, vapor and/or dust that may be toxic and/or respiratory irritants. To avoid risk of fire, keep sparks and other sources of ignition away from batteries, do not allow simultaneous metallic contact with positive and negative posts.

6. ACCIDENTAL RELEASE MEASURES

No health effects are expected related to the normal use of this product. If the article is recycled, lead dust or particulate should be vacuumed (using HEPA filter) or wet swept; minimizing fugitive emissions. Do not use compressed air or dry sweep. Prevent any spilled material from entering sewers and waterways. Sweep or shovel spilled material and place in a dry, closed approved container for disposal or recycle. Consult federal, provincial/state and local requirements for allowed means of disposal.

7. HANDLING AND STORAGE

Handling:

Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. There may be increased 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 reducing substances, strong oxidizers, extreme heat and water. Wear protective clothing and equipment during handling and avoid contact with skin, eyes and clothing. Wash after handling.

Storage:

Store batteries under roof in cool, dry, well-ventilated areas separated from incompatible materials and from activities or sources that may create flame, spark or heat. Keep away from metallic objects that could bridge the terminals on a battery and create a dangerous short circuit.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits (mg/m³)

CHEMICAL	OSHA PEL	NIOSH (US)	ACGIH	QUEBEC PEV	ONTARIO OEL	OEL (EU)
Lead and Lead Compounds (inorganic)	0.05	0.05	0.05	0.05	0.05	0.15(a)

(a) As inhalable aerosol

8. EXPOSURE CONTROLS / PERSONAL PROTECTION CONT'D.**Engineering Controls (Ventilation):**

Store and handle in a well-ventilated area. Charge batteries in areas with adequate ventilation. General dilution ventilation is acceptable.

Respiratory Protection:

None required under normal use conditions.

Skin Protection:

Wear chemical resistant gloves as a standard procedure to prevent skin contact.

Eye Protection:

Wear protective glasses or goggles if case is broken / damaged.

Other Protection:

None required under normal use conditions.
Wash hands after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

The following information is relevant to ingredients only and is only valid when contents are exposed:

ELECTROLYTE (SULFURIC ACID)	
Physical state, odor and appearance	Lead acid battery without electrolyte; odorless
Solubility in water (w/w)	Insoluble
Boiling point	N/A
pH	N/A
Evaporation rate (Butyl Acetate = 1)	N/A
Lower Explosive Limit (LEL)	N/A

ELECTROLYTE (SULFURIC ACID)	
Specific Gravity (H ₂ O = 1)	N/A
Vapor Pressure (mm Hg)	N/A
Vapor Density (Air = 1)	N/A
Flash Point	N/A
% Volatile by Weight	N/A
Upper Explosive Limit (UEL)	N/A

10. STABILITY AND REACTIVITY

Stability:
stable unstable

This product is stable under normal conditions at ambient temperature.

Conditions to avoid:

Prolonged overcharge at high current; sources of ignition.

Incompatibilities: (materials to avoid)

Lead Compounds – avoid contact with strong bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and strong reducing agents.

Hazardous Decomposition Products:

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.

Note: hazardous polymerization will not occur.

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II. TOXICOLOGICAL INFORMATION

Lead

Routes of Entry: hazardous exposure can occur only when product is heated, oxidized or otherwise processed or damaged to create dust, vapor or fume. The presence of nascent hydrogen may generate highly toxic arsine gas.

Inhalation – inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

Ingestion – 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 doctor.

Skin Contact – not absorbed through the skin.

Eye Contact – may cause eye irritation.

Effects of Overexposure (Acute) – symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.

Effects of Overexposure (Chronic) – 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 50µg/100mL or higher. Heavy lead exposure may result in central nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic) tissues.

Carcinogenicity – listed by International Agency for Research on Cancer (IARC) as Group 2A likely in animals at extreme doses; this is approximately equivalent to GHS Category 1B. Proof of carcinogenicity in humans is currently lacking.

Acute Toxicity:

	INHALATION	ORAL
Lead (Elemental)	Acute Toxicity Point Estimate = 4500 ppmV (based on lead bullion)	Acute Toxicity Estimate (ATE) = 500 mg/kg body weight (based on lead bullion)

Overexposure to lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases.

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 ingestions: wash hands, face, neck and arms thoroughly before eating, drinking, 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 and should be isolated from children and their environment.

12. ECOLOGICAL INFORMATION

Lead is very persistent in soil and sediment, however there is no data on environmental degradation. The 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).

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12. ECOLOGICAL INFORMATION CONT'D.**Aquatic Toxicity:**

Lead	48 hr LC ₅₀ (modeled for aquatic invertebrates)	<1 mg/L (based on lead bullion)
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13. DISPOSAL CONSIDERATIONS

Consult national/federal, provincial/state and local regulations for allowed means of disposal.

Spent batteries:

Send to secondary lead smelter for recycling.

Following local, provincial/state and national/federal regulations applicable to end of life characteristics will be the responsibility of the end user.

14. TRANSPORT INFORMATION**Ground (DOT/TDG)**

Not regulated as a hazardous material, dangerous goods.

Air (IATA/ICAO)

Not regulated as a hazardous material, dangerous goods.

Vessel (IMDG/IMO)

Not regulated as a hazardous material, dangerous goods.

Additional Information:

Battery, dry, not subject to Hazardous material requirements. Not regulated as a hazardous material therefore must not be marked with an identification number or hazardous label and is not subject to hazardous shipping paper requirements. Transport requires proper packaging and paperwork, including the nature and quantity of goods, per applicable origin / destination / customs points a shipped.

15. REGULATORY INFORMATION

TSCA Section 8b – Inventory Status: All chemicals comprising this product are listed on the TSCA Inventory.

TSCA Section 12b – Export Notification: The finished product does not contain chemicals subject to TSCA Section 12b export notification.

The lead used in lead-acid batteries does not qualify for any OSHA or EPCRA exemptions. Lead is not an EHS and the following table outlines the applicable EPCRA sections and their respective thresholds for lead:

EPCRA SECTIONS	THRESHOLDS
311 – MSDS Reporting	≥ 10,000 lbs
312 – Chemical Inventory Reporting (i.e. Tier II)	≥ 10,000 lbs

*The reporting threshold for sulfuric acid is ≥ the designated TPQ (Threshold Planning Quantity) or 500 lbs, whichever is less.

Section 313 EPCRA Toxic Substance:

The finished product contains chemicals subject to the reporting requirements of Section 313 of SARA Title III.

Note: the Section 313 reporting requirement does not apply to batteries that are “consumer products”.

15. REGULATORY INFORMATION CONT'D.

CHEMICAL	CAS NUMBER
Lead (~92% by weight)	7439-92-1

RCRA:

Spent lead acid batteries are subject to streamlined handling requirements when managed in compliance with 40 CFR section 266.80 or 40 CFR part 273. If applicable; EPA hazardous waste number D008 (lead).

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 and reproductive harm. Wash hands after handling.

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 +/- ON Reg 127/01:

CHEMICAL	CAS NUMBER	% WT
Lead	7439-92-1	92

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.

16. OTHER INFORMATION

Distribution within Canada to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2).

Distribution into Quebec to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2).

Distribution into the EU to follow applicable Directives to the Use, Import/Export of the product as-sold.

Disclaimer:

This Safety Data Sheet is based upon information and sources available at the time of preparation or revision. The information was obtained from sources believed to be reliable, however, not under our supervision or control.

Surrette Battery Company Limited makes no Warranty of Merchantability or any other warranty, expressed or implied, with respect to such information and we assume no responsibility resulting from its use. The data contained in this SDS is offered for your information, consideration and investigation. The guidelines for the safe handling and use of this product provided do not and cannot advise on every possible situation and use of this product should be assessed to determine if additional precautions are required. It is the responsibility of each user of this product to determine the suitability of this product and adhere to the requirements of all applicable laws regarding use, transport and disposal of this product.