

# Rolls

## SAFETY DATA SHEET - LEAD ACID BATTERY

### SECTION I - PRODUCT IDENTIFICATION

Product identifier:	Lead Acid Battery	Product use:	Lead Acid Storage Battery
Chemical family:	Lead Acid Storage Battery	Manufacturer's name & address:	Refer to supplier
Supplier's name & address:	Surette Battery Co. Ltd. P.O. Box 2020, 1 Station Road Springhill, NS B0M 1X0 (902) 597-3767	Emergency phone #:	CANUTEC (613) 996-6666

### SECTION II - HAZARDS IDENTIFICATION

WHMIS class: D1B Toxic Material Causing Immediate and Serious Toxic Effects E Corrosive Material

HMIS rating: Health 3, Fire 0, Reactivity 1



### SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	wt.%	LC <sub>50</sub> , mg/m <sup>3</sup> (Rat,ihl.)	LD <sub>50</sub> , mg/kg (Rat,oral)
Lead	7439-92-1	34	n/av	n/av
Lead Dioxide	1309-60-0	31	n/av	n/av
Sulfuric Acid (Battery Fluid)	7664-93-9 34	35	510 /2Hr	2140

**Rolls**  
BATTERY ENGINEERING  
MADE IN CANADA • ROLLSBATTERY.COM

**Surette**  
BATTERY COMPANY LIMITED  
1 STATION RD • SPRINGHILL, NS  
CANADA • B0M 1X0  
1.800.681.9914

## SECTION IV – FIRST AID MEASURES

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Applies to the battery fluid only:

**Inhalation:** Remove victim to fresh air. If breathing difficulty does not improve rapidly, get patient to a doctor.

**Skin:** Wash skin with mild soap and water. Rinse thoroughly. See a doctor if irritation persists.

**Eyes:** Flush with plenty of water for at least 20 minutes. Get medical attention immediately.

**Ingestion:** Get immediate medical attention. Do not induce vomiting

## SECTION V – FIRE FIGHTING MEASURES

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**Suitable extinguishing agents:**

Water (if battery acid is not in danger of being exposed)

Use agent suitable for surrounding fire

**Unsuitable extinguishing agents:**

Water (if battery acid or metal is exposed or could be exposed)

**Protective equipment:**

Cartridge type mask or self-contained breathing apparatus approved by NIOSH

PVC or Neoprene protective gloves

Chemical splash guards or face shield

Acid resistant clothing

## SECTION VI – ACCIDENTAL RELEASE MEASURES

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Applies to the battery fluid only:

**Personal protective precautions:** Use full protective clothing, including boots and protective equipment. Contain spill in order to prevent contamination of sewage system or waterway. Pump into mark containers for reclamation or disposal. If possible, neutralize on a dry basis with suitable alkali such as lime, soda ash, or sodium bicarbonate, then flush with water in accordance with applicable regulations.

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

## SECTION VII – HANDLING AND STORAGE

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**Handling procedures and equipment:** Avoid contact with skin, eyes and clothing. Protect containers from physical damage. Wear protective equipment during handling. When diluting, slowly add acid to water (never water to acid) while stirring to avoid spattering or boiling. Wash thoroughly after handling, emptied containers retain vapour and product residue.

**Storage requirements:** Store in a cool, dry area. Store away from sources of ignition. Keep container closed and protect from contact with water to avoid possible violent reaction.

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## SECTION VIII – EXPOSURE CONTROLS / PERSONAL PROTECTION

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**Engineering controls:** Local exhaust is required. Mechanical ventilation (general) - not compulsory.

**Respiratory protection:** Cartridge type mask or self-contained breathing apparatus approved by NIOSH, depending on exposure.

**Protective gloves:** PVC or Neoprene.

**Eye protection:** Chemical splash goggles or face shield.

**Other protective equipment:** Depending on exposure and on workplace standards. Safety showers and eye wash station should be installed in storage and handling areas.

## SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

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**Physical state, odour and appearance:** A transparent to opaque case and sealed cover fitted with side or top terminals and vent caps, odourless, colourless.

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

### Lead

Physical state, odour and appearance:	grey solid, odourless	Odour threshold:	n/ap
Vapour pressure:	n/ap	Relative density:	11.349
Viscosity:	n/ap	Vapour density (Air=1.0):	n/ap
Boiling point:	1749 °C	Evaporation rate (n-BuAc=1.0):	n/ap
Melting/freezing point:	328 °C	Solubility in water (w/w):	low
pH:	n/ap	Volatiles, %:	n/ap
Flammable limits:	non-flammable	Auto-ignition temperature:	n/ap
Flashpoint:	n/ap		

### Sulfuric Acid

Physical state, odour and appearance:	clear colourless liquid, odourless	Odour threshold:	n/ap
Vapour pressure:	n/ap	Relative density:	1.100 – 1.200
Viscosity:	26.7 cP (20°C)	Vapour density (Air=1.0):	n/ap
Boiling point:	337 °C (decomposes above 300 °C)	Evaporation rate (n-BuAc=1.0):	n/ap
Melting/freezing point:	10 °C	Solubility in water (w/w):	complete
pH:	0.3	Volatiles, %:	n/ap
Flammable limits:	non-flammable	Auto-ignition temperature:	n/ap
Flashpoint:	n/ap		



## SECTION X – STABILITY AND REACTIVITY

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**Stability:** Stable. n/ap

**Incompatible materials:** Battery fluid is highly reactive with materials such as metals, metal oxides, hydroxides, nitrates, amines, carbohydrates and other alkaline materials. Reactions can generate a great deal of heat as does the dilution of acid with water. Never add water to acid. Acid should always be added slowly to the water.

**Hazardous decomposition products:** For battery fluid - If heated above 300°C, sulfuric acid will decompose to sulfur trioxide and water.

## SECTION XI – TOXICOLOGICAL INFORMATION

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**Exposure limits:** ACGIH-TLV not applicable for this article. No possibility of exposure to lead or sulfuric acid during normal operation of the battery. This information only applies to a broken product where contents are exposed.

	LC <sub>50</sub> , mg/m <sup>3</sup> (Rat,ihl.)	LD <sub>50</sub> , mg/kg (Rat,oral)
Sulfuric acid	510 /2Hr	2140

- **Routes of exposure:** inhalation, ingestion, skin or eye contact.
- **Inhalation:** Not expected to be an inhalation hazard unless heated or misted. Can cause severe irritation of the nose and throat
- **Skin contact:** CORROSIVE. Contact can cause pain, redness, burns, and blistering. Permanent scarring can result.
- **Eye contact:** CORROSIVE. Contact causes severe burns with redness, swelling, pain and blurred vision.
- **Ingestion:** Can burn the lips, tongue, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.
- **Effects of long-term (chronic) exposure:** Can cause dry, red, cracked skin (dermatitis) following skin contact.
- **Carcinogenicity:** Not known to cause cancer.
- **Teratogenicity / embryotoxicity:** Not known to harm the unborn child.
- **Reproductive toxicity:** Not known to be a reproductive hazard.
- **Mutagenicity:** Not known to be a mutagen.

	LC <sub>50</sub> , mg/m <sup>3</sup> (Rat,ihl.)	LD <sub>50</sub> , mg/kg (Rat,oral)
Lead, lead dioxide	n/av	n/av

**Routes of exposure:** ingestion, inhalation

- **Inhalation:** At high concentrations: can irritate the nose and throat
- **Ingestion:** Not expected to cause effects following short-term exposure. See Effects of Long-Term (Chronic) Exposure.
- **Effects of long-term (chronic) exposure:** VERY TOXIC. Can cause permanent damage to the nervous system. Can cause permanent damage to the kidneys.
- **Carcinogenicity:** Possible carcinogen. May cause cancer based on animal information.
- **Teratogenicity / embryotoxicity:** DEVELOPMENTAL HAZARD. May harm the unborn child. Known to cause: learning disabilities, effects on behaviour.
- **Reproductive toxicity:** REPRODUCTIVE HAZARD. May cause reproductive effects in men and women. Has been associated with: reduced fertility.
- **Mutagenicity:** MUTAGEN. May cause genetic damage. Exposure of the parent may cause effects in children.

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## SECTION XII – ECOLOGICAL INFORMATION

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No possibility of exposure to lead or sulfuric acid during normal operation of the battery. This information only applies to a broken product where contents are exposed.

### Lead/Lead dioxide

	NOEC (µg Pb/L)	96 h LC <sub>50</sub>
Fish toxicity	7 - 250	0.1 mg/L
Algae toxicity	0.1 – 60	n/av

There is little evidence for effects of lead on aquatic plants at concentrations < 15mg/L

Toxic effects of lead are visible in the range of 100 – 1000 mg/kg in soil. Lead is not likely to affect plants except in cases of very high environmental concentration. Soil lead concentration regulations vary by country.

There is no potential for bioaccumulation or biomagnification in aquatic food chain.

### Sulfuric Acid

Sulfuric acid is harmful to aquatic life in very low concentrations. It may be dangerous if it enters water intakes.

## SECTION XIII – DISPOSAL CONSIDERATIONS

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**Handling procedures and equipment:** Avoid contact with skin, eyes and clothing. Protect containers from physical damage. Wear protective equipment during handling. When diluting, slowly add acid to water (never water to acid) while stirring to avoid spattering or boiling. Wash thoroughly after handling. Emptied containers retain vapour and product residue.

**Waste disposal:** Consult federal provincial and local regulations for allowed means of disposal.

## SECTION XIV – TRANSPORT INFORMATION

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Special shipping instructions: TDG – UN No. 2794 Batteries, wet, filled with acid. Class 8 P.G. III

## SECTION XV – REGULATORY INFORMATION

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

### WHMIS class/Description:

D1B Toxic Material Causing Immediate and Serious Toxic Effects  
E Corrosive Material

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## SECTION XVI – OTHER INFORMATION

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Prepared by: Surrette Battery Co. Ltd.  
Telephone #: (902) 597-3767  
Preparation Date: 21-Jan-2010  
Revision Date: Mar-2015

### Additional notes or references:

#### Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists

IARC: International Agency for Research on Cancer

n/ap: Not applicable

n/av: Not available

NIOSH: National Institute for Occupational Safety and Health

NOEC: No Observed Effect Concentration

CC: Tagliabue Closed Cup

WHMIS: Workplace Hazardous Materials Information System

TDG: Transportation of Dangerous Goods Act and Regulations

TLV: Threshold Limit Values

TWA: Time Weighted Average

#### References:

1. Van Nostrand Reinhold, Dangerous Properties of Industrial Materials, Seventh Edition, N. Irving Sax
2. Canadian Centre for Occupational Health and Safety. RTECS (Registry of Toxic Effects) and CHEMINFO databases
3. ACGIH, Threshold Limit Values and Biological Exposure Indices for 1997
4. International Agency for Research on Cancer Monographs, Supplement 7, 1988
5. Risks to Health and the Environment related to the Use of Lead in Products (TNO Report STB-01-39 (Final), 2001). Published by European Commission, REACH Initiative

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