



MATERIAL SAFETY DATA SHEET - AGM BATTERY

Section I - Product Identification

Product identifier: Absorbed Electrolyte Battery (AGM)/ HGL, DC, HGHL
Sealed Valve Regulated Lead-Acid Battery

Product use: Electric Storage Battery

Chemical family: Lead Acid Storage Battery

Supplier's name and address:

Surette Battery Co. Ltd.
P.O. Box 2020, 1 Station Road
Springhill, N.S.
B0M 1X0 (902) 597-3767

Manufacturer's name and address:

Refer to Supplier

Emergency Telephone #: CANUTEC (613) 996-6666

WHMIS CLASS: Exempt (Manufactured Article)

Section II - Hazardous Ingredients

Ingredients	LC₅₀, ppm	LD₅₀, mg/kg	CAS #	wt.%	(Rat,ihl.)	(Rat,oral)
Inorganic Lead / Lead compounds			7439-92-1	65-75%	n/av	n/av
Tin			7440-31-5	<0.5%	n/av	n/av
Calcium			7440-70-2	<0.2%	n/av	n/av
Sulfuric Acid (40%)			7664-93-9	16-21%	n/av	n/av
Fiberglass Separator			-	5%	n/av	n/av
Acrylonitrile Butadiene Styrene(ABS)			9003-56-9	5-10%	n/av	n/av

Section III - Physical Data

Manufactured Article:

Physical state, odor and appearance: Clear liquid with a sharp, penetrating, pungent odour.

Odor threshold: n/ap

Specific gravity (at °C): n/ap

Coefficient of water/oil distribution: n/ap

Vapour pressure: n/ap

Boiling point: n/ap

Melting/freezing point: n/ap

pH: n/ap

Vapour density (Air=1 .0): n/ap

Evaporation rate (n-BuAc=1 .0): n/ap

Volatiles, %: n/ap

Solubility in water (w/w): n/ap

Electrolyte:

Physical state, odor and appearance: A transparent to opaque case and sealed cover fitted with side or top terminals and vent caps, odorless.

Odour threshold: n/ap

Specific gravity (at °C): 1.300-1.330

Coefficient of water/oil distribution: n/ap

Vapour pressure: 10

Boiling point: 203-240F

Melting/freezing point: n/ap

pH: n/ap

Vapour density (Air=1 .0): 3.4

Evaporation rate (n-BuAc=1 .0): 1

Volatiles, %: n/ap

Solubility in water (w/w): 100%

Section IV - Fire and Explosion Data

Hydrogen

Conditions of flammability:

Means of extinction: Dry Chemical, Foam, CO2

Sensitivity to mechanical impact/static discharge: n/ap

Flash point (Method): None.

Lower/upper flammable limits (% by volume): 4.1/74.2

Auto-ignition temperature: 580

Hazardous combustion products: n/ap

Unusual fire and explosion hazards: If AGM batteries are properly charged they will not release any flammable hydrogen gas. If they are excessively overcharged the safety relief valve can open and release flammable hydrogen gas. They must always assumed to contain this gas which, 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 instruction 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.

Section V - Reactivity Data

Stability: Stable

Conditions of reactivity: High Temperature, Sparks and other sources of ignition

Incompatible materials:

Electrolyte (Water and Sulfuric Acid Solution) – Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metal, sulfuric 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, halogenated, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents.

Hazardous decomposition products:

Sulfuric Acid – Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide and hydrogen.

Lead Compounds – High temperatures likely to produce toxic metal fume, vapor, or dust; contact with a strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

Section VI - Toxicological Properties

Routes of exposure and acute/chronic effects

Exposure limits: ACGIH-TLV Not applicable for this article.

Inhalation: n/ap

Skin contact: n/a

Eye contact: n/ap

Ingestion: n/ap

Chronic effects: None known.

Carcinogenicity: Lead and lead dioxide are listed as carcinogens, however there is not possibility for exposure under normal conditions of use.

Teratogenicity, mutagenicity, other reproductive effects: n/av

Sensitization to material: Product is not known to cause allergies.

Synergistic materials: None known.

Section VII - First Aid

Sulfuric Acid

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.

Lead Compounds:

Inhalation: Remove victim from exposure, gargle, wash nose and lips; get patient to a doctor.

Skin: Wash skin with mild soap and water. Rinse thoroughly.

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 VIII - Preventative Measures

For the battery fluid only:

Spill, leak or release: 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.

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

PROTECTIVE EQUIPMENT

For the battery fluid only:

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

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

Protective gloves: PVC or Neoprene.

Eye protection: Chemical splash goggles or face shield.

Other protective equipment: Safety shoes worn with rubber/neoprene boots or steel-toed rubber/neoprene boots to be worn over socks. Place pants' legs over boots to keep acid out of boots.

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

STORAGE AND HANDLING

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.

Special shipping instructions: Batteries, non-spillable, non-hazardous.

Section IX - Preparation Information

Prepared by: Surrette Battery Co. Ltd.

Telephone #: (902) 597-3767

Preparation date: 11-May-2010

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

TCC: 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.