Rolls

MATERIAL SAFETY DATA SHEET - BATTERY ACID

Section I - Product Identification

Product identifier: Battery Acid

Product use: Lead/Acid Battery

Chemical family: Mineral acids.

Supplier's name and address:
Surrette 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: D1B, E

HMIS rating: Health 3 Fire 0 Reactivity 1

Section II - Hazardous Ingredients

Ingredients	CAS #	wt.%	LC_{50}, ppm (Rat,ihl.)	LD_{50}, mg/kg (Rat,oral)
Sulfuric acid	7664-93-9	35-40	510 mg/m^3	/2Hr 2140

Section III - Physical Data

Physical state, odour and appearance: Clear, colourless, liquid that is odourless unless heated, than odour becomes sharp and choking.

Odour threshold: n/av

Specific gravity (at °C): 1.265

Coefficient of water/oil distribution: n/av

Vapour pressure: n/av

Boiling point: 110°C

Melting/freezing point: 0.7°C **pH:** <1

Vapour density (Air=1.0): Low

Evaporation rate (n-BuAc=1.0): n/av

Volatiles, %: n/av

Solubility in water (w/w): 100%

Section IV - Fire and Explosion Data

Conditions of flammability: Non-flammable liquid.

Means of extinction: Use media appropriate for surrounding fire.

Sensitivity to mechanical impact/static discharge: Not susceptible to mechanical impact or static discharge.

Flash point (Method): None. **Lower/upper flammable limits (% by volume):** n/ap

Auto-ignition temperature: n/ap

Hazardous combustion products: Refer to "Hazardous decomposition products" (next section)

Unusual fire and explosion hazards: Sulfur dioxide, sulfur trioxide, sulfuric acid fumes. Evolution of explosive Hydrogen gas on contact with most metals.

Section V - Reactivity Data

Stability: Stable. Hazardous polymerization will not occur.

Incompatible materials: 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.

Conditions of reactivity: Product may decompose if exposed to high temperatures.

Hazardous decomposition products: If heated above 340^{o}C, sulfuric acid will decompose to sulfur trioxide and water.

Section VI - Toxicological Properties

****Routes of exposure and acute/chronic effects****

Exposure limits: ACGIH-TLV 1 mg/m^{3} or 0.25 ppm expressed as mist or spray.

Inhalation: Mists and vapours are corrosive and can cause severe irritation or damage to the mouth, nose, throat and lungs. Exposure levels can affect symptoms from mild coughing, sneezing, tickling sensation in the nose and throat to bronchitis and pulmonary edema.

Skin contact: Corrosive - causes burns, and destruction of all tissues. Severity of the burns is generally determined by the concentration of the solution and duration of exposure.

Eye contact: Contact with even small amounts can cause severe damage (corneal) burns and/or necrosis which may result in loss of sight.

Ingestion: Harmful or fatal if swallowed. Causes burns to the GI system.

Chronic effects: None known.
Carcinogenicity: Not listed by IARC or ACGIH.
Teratogenicity, mutagenicity, other reproductive effects: None known.

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

Synergistic materials: None known.

Section VII - First Aid

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 VIII - Preventative Measures

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*****

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: 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: Special shipping instructions: TDG - Battery fluid, acid, Class 8(9.2), UN2794, P.G. III

Section IX - Preparation Information

Prepared by: Surrette Battery Co. Ltd.

Telephone #: (902) 597-3767

Preparation date: 21-January-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.