



MATERIAL (SAFETY DATA SHEET)

PRODUCT 24200 BATTERY

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I. Product Identification

Product code: 24200
Synonyms: DC Power Source

Manufacturer/Supplier
Delta Kits Inc.
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Chemtel
Emergency Telephone number
(800)-255-3925 US
(813)-248-0585 Int.

II. Hazard identification

Routes of Entry: In new condition manufactured article (under normal conditions of use)

Skin Contact : Minor Eye Contact: Minor Ingestion: Minor Inhalation: Minor

DAMAGED OR LEAKING BATTERY

Skin Contact : Major Eye Contact: Major Ingestion: Moderate Inhalation: Moderate

Effects of Short-Term(Acute)Exposure

Inhalation:

This battery is sealed and does not release gasses or mists during use or recharging, therefore, inhalation is not a route of exposure for this product. In the case of a leaking battery, inhalation of Sulphuric acid or mists may cause severe mucous membrane and respiratory tract irritation. Severe overexposure may cause pulmonary edema.

Skin Contact:

This battery is sealed and will not leak electrolyte under normal conditions of use, hence skin contact with electrolyte is unlikely. In the case of a leaking or damaged battery, acid contact will cause severe irritation and burns.

Eye Contact:

This battery is sealed and will not leak electrolyte under normal conditions of use, hence eye contact with electrolyte is unlikely. In the case of a leaking or damaged battery, acid contact will cause severe irritation, burns, corneal damage and possible blindness.

Ingestion:

This battery is sealed and will not leak electrolyte under normal conditions of use, therefore, ingestion of the electrolyte is very unlikely. Swallowing of the acid electrolyte will cause severe irritation and burns of the mouth and gastrointestinal tract.

Effects of long-Term (Chronic) Exposure:

Long term exposure to battery electrolyte may cause lead poisoning with such symptoms as fatigue, insomnia, constipation, abdominal pain, central nervous system depression, anemia. May also accumulate in target organs such as the kidneys and liver.

Lead exposure is known to cause birth defects and reproductive problems. Chronic exposure to Sulphuric acid mist may cause lung damage and increase the risk of lung cancer.

Medical conditions aggravated by exposure: Pre-existing respiratory and skin disorders.

III. Composition

Chemical Name	Weight-%	C.A.S. number
Lead, Lead sulphate, Lead oxide(as lead)	65-75	7439-92-1
Sulphuric acid	17.-30	7664-93-9

IV. First Aid Measures

Eye Irritation: Immediately flush eyes with plenty of lukewarm water for at least 30 minutes. Holding eyelids open. Seek medical attention if irritation persists.

Skin Contact: Wash affected area immediately with mild soap and water and continue for 15 minutes. If irritation persists, seek immediate medical attention. Remove any contaminated clothing and launder clothing before reuse.

Inhalation: If victim has been exposed to vapors remove to fresh air. If breathing has stopped, a trained person should perform artificial respiration. Get medical attention immediately.

Ingestion: If small amounts have been ingested, **do not induce vomiting**. Dilute contents of stomach with 1-2 glasses of water. If large amounts have been ingested, see a doctor immediately for gastric lavage with a cuffed endotracheal tube. If vomiting occurs naturally have victim lean forward to reduce risk of aspiration. Seek immediate medical attention.

V. Fire-Fighting Measures

Suitable extinguishing media: No specific recommendation. Use media to suppress surrounding fire.

Flash point: Not Applicable

Auto ignition temperature: Not applicable. See information under "Fire Fighting instructions:

Explosion data: Lower limit: 4% (Hydrogen) Upper limit: 75% (Hydrogen)

Sensitivity to impact: Not sensitive.

Sensitivity to static discharge: Hydrogen gas is sensitive.

Hazardous combustion products: Burning may produce oxides of sulphur, hydrogen and lead, lead oxides and oxides of various lead impurities. Do not enter confined fire space without proper personal protection. Use approved positive pressure self-contained breathing apparatus. Do not use water except as a fog. Cool surrounding containers with water spray. Prevent runoff to sewers and waterways.

Fire fighting instructions: Do not use water except as a fog. Cool surrounding containers with water spray. Prevent runoff to sewers and waterways.

Health: 3 Very short exposure could cause serious temporary or residual injury requiring immediate attention.

Flammability: 0 Will not burn.

Reactivity: 1 Normally stable but can become unstable at elevated temperatures and pressures, or may react non-violently with water.

Specific Hazards: Corrosive, toxic.

VI. Accidental Release Measure

Personal safety: Evacuate unnecessary personnel from spill area. Wear appropriate personal protective equipment. Ventilate area. Do not touch spilled product without proper personal protection. See section 8 for proper protective equipment to be worn while cleaning an accidental spill.

Environmental safety: Implement spill control plan. Stop or reduce leak if safe to do so. Prevent from entering sanitary or storm sewers, waterways, or confined spaces. Use inert materials such as earth or sand to form dike. Keep from contacting aquatic life.

Methods for cleaning up: Restrict access to area until completion of cleanup. Ensure cleanup is conducted by trained personnel only. Use all appropriate personal protective equipment. For small spills: absorb with neutralizing materials such as soda ash or lime and collect in sealed containers. Flush area with water. For large spills, contain and collect spilled material if possible. Notify government occupational health and safety and environmental authorities as per applicable regulations.

VII. Storage and Handling Procedures.

Storage: Store in a well-ventilated area away from extreme heat, sparks, or open flames. Store away from incompatible materials. Electrolyte contact with combustible or organic materials may cause fire or explosion. Electrolytes may react violently with strong reducing agents, metals, sulphur trioxide gas and water. Contact with metals may produce toxic sulphur dioxide and flammable hydrogen gas. Keep storage area separate from populated work areas.

Handling: Handle the battery with care. Rough treatment or dropping may cause a fracture in the battery case releasing electrolyte. Should this occur, avoid all skin contact. Store in a well-ventilated area away from extreme heat, sparks, or open flames. Take care not to short circuit battery terminals. Do not cover battery terminals with materials such as clothing, sleeping bags, or rags. Do not recharge battery in damp, moist areas. Wash face and hands thoroughly after handling and before eating, or using tobacco products.

VIII. Exposure Controls and Personal Protection

Chemical name	ACGIH TLV	ACGIH PEL	TLV
Lead, Lead sulphate, Lead oxide	TWA: 0.05 mg/m ³	TWA: 0.05 mg/m ³	
Sulphuric acid	TWA: 1.0 mg/m ³	TWA: 1.0 mg/m ³	STEL: 3.0 mg/m ³

Engineering controls: Use general or local exhaust ventilation to maintain exposure below the exposure limits.

Respiratory: If respiratory protection is required, NIOSH recommends for Sulphuric acid vapor or mist in air: Up to 25 ppm: Chemical cartridge respirator with inorganic acid cartridge(s), powered air-purifying respirator with appropriate cartridge(s), Supplied Air Respirator(SAR), or a full face-piece SCBA. IDLH Conditions (25ppm) or Planned entry I unknown concentrations: Positive pressure, full face-piece SCBA, or positive pressure full face-piece SAR with an auxiliary positive pressure SCBA.

Escape: Gas mask with canister, or escape type SCBA

Note: Air purifying respirators don't protect against oxygen deficient atmospheres.

Skin: Wear impervious gloves and boots and/or other protective clothing according to circumstances.

Eyes: Eye protection is required. Chemical safety goggles are recommended. The wearing of contact lenses is not recommended.

Footwear: As required by worksite rules.

Other: Have a safety shower and eyewash station readily available in the immediate work area.

IX. Physical and Chemical Properties.**For Electrolyte:**

Appearance:	Colorless to yellow-brown liquid	Vapor Density:	Low
Boiling Point	230°F (110°C)	Freezing point	-40.0°F (-40°C)
Odor :	Sharp acrid odor	Evaporation Rate	Not Determined
Odor Threshold:	Not Determined	pH:	<1
Vapor Pressure:	Not Determined	Critical Temperature	Not applicable.
Solubility	Completely soluble in water	Relative Density:	1.265 (water = 1)
Partition Coefficient:	Soluble in water		

X. Stability and reactivity

Chemical Stability: Stability: Stable. Avoid heat - releases toxic gases with heat.

Hazardous Decomposition Products: Thermal decomposition liberates toxic corrosive fumes of Sulphur trioxide and water.

Hazardous polymerization: Will not occur.

Incompatibility: Very corrosive to most metals, producing flammable hydrogen gas. Reacts violently with bases to produce heat. Reacts with reducing agents to produce heat, fire and flammable hydrogen gas. Reacts with oxidizing agents to produce heat. Reacts with carbides, turpentine, phosphorus hydrogen sulphide, organic materials, and alkalis. Contact with explosives may cause detonation. Reacts with cyanides to produce toxic cyanide gas, and sulphides to produce toxic hydrogen sulphide gas.

XI. Toxicological Information

No Acute toxicity information is available for this product.

Chemical name	Oral LD50	Inhalation LC50
Lead, Lead sulphate, Lead oxide	Not available for lead	Not available for lead
Sulphuric acid	= 2140 mg/kg (Rat)	> 255 mg/kg ³ (Rat/ 4-hour exposure)

Delayed and immediate effects as well as chronic effects from short and long-term exposure.

Sensitization: See section 3

Mutagenic effects: Inconclusive results.

Reproductive toxicity: Lead compounds are possible reproductive toxins.

Teratogenicity: No reports for ingestion or inhalation of lead compounds

Carcinogenicity: Many lead compounds are possible carcinogens.

XII. Ecological Information

Environmental toxicity: Information is scarce, but many lead compounds are marine pollutants.

Biodegradability: No data available.

XIII. Disposal considerations

Waste Disposal Methods: Place used and contaminated material and packaging's into suitable containers and dispose of as controlled waste. Review and follow all local, provincial, and national regulations.

XIV. Transportation information

DOT, ICAO/IATA, IMDG/IMO, TDG, CLR: Not Regulated

XV. Regulatory Information.

CEPA, Domestic Substance list: All ingredients are listed.

WHIMIS: D1A, D2B, E

US Federal Regulations**XVI. Other information**

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