MATERIAL SAFETY DATA SHEET
FOR LEAD- ACID BATTERIES, WET, FILLED WITH ACID – UN 2794

CHEMTREC CODE: C677

SECTION I: GENERAL INFORMATION

Manufacturers Name:	Crown Battery Mfg. Company
Street Address:	1445 Majestic Drive
City, State, Zip:	Fremont, Ohio 43420
Phone Number;	419 334-7181
Revision Date:	12/01/09

For Chemical Emergency
Spill Leak Fire Exposure or Accident
Call CHEMTREC Day or Night
DOMESTIC NORTH AMERICA 800-424-9300
INTERNATIONAL, CALL 703-527-3887
(collect calls accepted)

SECTION II: MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS Hazardous Components 1% or greater Carcinogens 0.01 % or greater	PERCENT	OSHA PEL	ACGIH TLV	OTHER LIMITS	CAS NUMBER
METALLIC METAL ALLOY	25.5%	0.05mg/m3	.05 mg/m3	NONE	7439-92-1
LEAD SULFATES	18.2%	0.05mg/m3	.05 mg/m3	NONE	7439-92-1
LEAD OXIDES	22.0%	0.05mg/m3	.05 mg/m3	NONE	7439-92-1
POLYPROPYLENE CASE MTL	6.4%				
SEPARATORS	3.5%				
SULFURIC ACID (H2SO4)	5.2%	1.0 mg/m3	1.0 mg/m3	NONE	7664-93-9
WATER	19.2%				

SECTION III: PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point	Approximately 203F	Vapor Density:	Greater than 1
Vapor Pressure	14 PSI @ 37% @ 80 F mercury	Melting Point:	-35 F to +10.6 F
Solubility in Water	100%	Water Reactive	Yes, Produces Heat
Specific Gravity	1.245 - 1.295 Battery Electrolyte		
Appearance & Odor:	Clear Liquid with Sharp Pungent Odor		

SECTION IV: FIRE AND EXPLOSION HAZARD DATA:

Flash Point: Not Combustible
NFPA WARNING: 1
Auto Ignition Temperature N/A Flammability Limits In Air % by Volume: N/A
Extinguishing Media: Dry Chemical Carbon Dioxide, Water Fog, Water
Special Fire Fighting Procedures: Sulfuric Acid Fumes, Sulfur Dioxide Gas or Carbon Monoxide may be released when acid decomposes. Wear NIOSH approved self contained breathing apparatus, if needed.

Unusual Hazards: Water applied to sulfuric acid generates heat and causes acid to spatter. Wear full-cover acid resistant clothing. Sulfuric acid reacts violently with metals, nitrates, chlorates, carbides, fulminates, picrates and other organic materials. Reacts with most metals to yield explosive/flammable hydrogen gas. This reaction is intensified when sulfuric acid is diluted with water to form battery electrolyte.

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SECTION V: REACTIVITY DATA

Stability: STABLE NFPA WARNING: 0

CONDITIONS TO AVOID: Charging and over-charging without proper ventilation.

Incompatibility: AVOID COMBUSTIBLES, ORGANIC MATERIALS, AND STRONG REDUCING AGENTS.

Hazardous Decomposition Products:

SULFUR TRIOXIDE, CARBON MONOXIDE, SULFURIC ACID FUMES AND SULFUR DIOXIDE. Hydrogen, Arsine, Stibene with over charging.

Hazardous Polymerization: Should not occur

SECTION VI – HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation - Yes NPFA WARNING: 3
Skin Yes
Ingestion Yes

HEALTH HAZARDS - Acute: Eyes, Skin, Respiratory System & Digestive System
Chronic: Eyes, Skin, Respiratory System & Digestive System

Exposure to Lead Compounds can occur only when product is heated, oxidized or other-wised processed or damaged to create dust vapor or fume. Lead is a systemic poison.

Carcinogenicity - NTP: No
Carcinogenicity - IARC: Yes (Group 2 B *94-4*
Carcinogenicity -OSHA: No

Signs and Symptoms of Exposure: Irritation of Exposed Area, Burns, and Respiratory Problems
No possibility of over exposure of lead will occur unless battery is destroyed.

MEDICAL CONDITIONS GENERALLY:

Aggravated by Exposure: Exposure to acid mist may cause lung damage & aggravate pulmonary conditions.

EMERGENCY FIRST AID PROCEDURES

Seek medical assistance for further treatment, observation and support if necessary.

Eye Contact: Wash with copious quantities of cool water for at least 15 minutes.
Skin Contact: Flush area with large amounts of cool water for at least 15 minutes.
Inhalation: Remove to fresh air, if breathing is difficult – give oxygen.
Ingestion: Give milk to drink. DO NOT INDUCE VOMITING, CALL PHYSICIAN.

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SECTION VII:SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

STEPS TO TAKE IF MATERIALS RELEASED:

Wash area with water, neutralize with lime, caustic soda or sodium bicarbonate. If released on soils: work neutralizing materials into top three inches of soils.

Neutralizing Agent: Lime, Caustic Soda, or Sodium Bicarbonate.

Waste Disposal Method: Neutralize and dispose of residue in accordance with federal, state and local regulation for chemical and toxic metals disposal.

Lead and Sulfuric Acid is packed into a container to form the lead-acid battery. Since all containers are subject to leakage and breakage, employees who work in operations where they handle batteries in containers are potentially exposed to hazardous chemicals, and, therefore, need access to information as well as training.

SECTION VI II– SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection: If, and/or when needed, wear Sulfuric Acid Mist-Mask with filter approved for acid mist.

Ventilation: Local exhaust: Room air change four times per hour.

Protective Gloves: Rubber

Eye Protection: Goggles, Face Shield

Other Protective Equipment: Rubber Apron, Acid Resistant Clothing Recommended

Work Hygienic Practices: Wash thoroughly after handling

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

COMPONENTS

METALLIC METAL ALLOY	25.5%
LEAD SULFATES	18.2%
LEAD OXIDES	22.0%
POLYPROPYLENE CASE MTL	6.4%
SEPARATORS	3.5%
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WATER	19.2%

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SECTION X – STABILITY AND REACTIVITY

Stability: STABLE

CONDITIONS TO AVOID: Charging and over-charging without proper ventilation.

Incompatibility: AVOID COMBUSTIBLES, ORGANIC MATERIALS, AND STRONG REDUCING AGENTS.

SECTION XI: TOXICOLOGICAL INFORMATION

HEALTH HAZARDS - Acute: Eyes, Skin, Respiratory System & Digestive System
Chronic: Eyes, Skin, Respiratory System & Digestive System

Signs and Symptoms of Exposure: Irritation of Exposed Area, Burns, and Respiratory Problems
No possibility of over exposure of lead will occur unless battery is destroyed.

MEDICAL CONDITIONS GENERALLY:

Aggravated by Exposure: Exposure to mist may cause lung damage & aggravate pulmonary conditions.

SECTION XII – ECOLOGICAL INFORMATION

All care should be taken to protect the environment from any adverse impact by lead-acid batteries or from the batteries ingredients.

SECTION XIII – DISPOSAL CONSIDERATION

Lead-Acid Batteries are restricted land disposal objects. All spent lead-acid batteries should be properly Recycled to a permitted Secondary Lead Smelter.

All battery parts should be properly recycled.

No whole spent lead-acid battery should be land-filled or placed in house hold garbage.

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SECTION XIIII – TRANSPORT INFORMATION

Electric storage batteries containing electrolyte acid or alkaline corrosive battery fluid must be completely protected so that short circuits will be prevented.

DOT SHIPPING NAME: LEAD-ACID BATTERIES, WET, FILLED WITH ACID
DOT CLASS: 8
DOT ID NUMBER: UN2794
DOT PACKING GROUP: III
DOT LABEL REQUIREMENTS: CORROSIVE

SECTION XV – REGULATION INFORMATION

REGULATORY INFORMATION: Those ingredients in lead-acid batteries listed above are not subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Re-authorization Act, if the lead acid batteries are in storage and have no potential to leak, spill or break during normal storage prior to use.

DOT REGULATIONS: 49 CFR 173.159

EPA REGULATIONS: 40 CFR 266.80

OSHA REGULATIONS: 29 CFR 1910.1200