

# MATERIAL SAFETY DATA SHEET

## FOR LEAD- ACID BATTERIES, WET, FILLED WITH ACID – UN 2794

### 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

EMERGENCY NO: DAYS - 800 487-2879  
OR NIGHTS - 419 334-7187  
OR 800- OIL-TANK  
REVISION DATE: 09/20/2001

### SECTION II: MATERIAL IDENTIFICATION AND INFORMATION

| <u>COMPONENTS</u>                                                      | <u>PERCENT</u> | <u>OSHA</u><br>PEL | <u>ACGIH</u><br>TLV | <u>OTHER LIMITS</u> | <u>CAS NUMBER</u> |
|------------------------------------------------------------------------|----------------|--------------------|---------------------|---------------------|-------------------|
| Hazardous Components<br>1% or greater<br>Carcinogens 0.01 % or greater |                |                    |                     |                     |                   |
| 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                                                            | 18.0%          | 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 @ 37% @ 80 F                      | 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  
Auto Ignition Temperature: N/A  
Extinguishing Media: Dry Chemical Carbon Dioxide, Water Fog, or Water  
Flammability Limits in Air % by Volume: N/A

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.

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

**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 |
| Skin:       | Yes |
| Ingestion:  | Yes |

**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.

### **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.

### SECTION VIII: SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection: 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                                     | 18.0% |
| POLYPROPYLENE CASE MTL                          | 6.4%  |
| SEPARATORS                                      | 3.5%  |
| SULFURIC ACID (H <sub>2</sub> SO <sub>4</sub> ) | 5.2%  |
| WATER                                           | 19.2% |

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### SECTION X: STABILITY AND REACTIVITY

**Condition of the Battery:** A lead-acid battery that is filled with acid whose case is in good condition and not broken is an “Article” as defined in State and Federal regulations. This article is stable and should leak no hazardous materials.

**Conditions to Avoid:** Over charging or charging without adequate ventilation.

### 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 battery 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 placed in a landfill or placed with household garbage.

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## **FOR LEAD- ACID BATTERIES, WET, FILLED WITH ACID – UN 2794**

### **SECTION XIV: TRANSPORT INFORMATION**

Electric storage batteries containing electrolyte acid or alkaline corrosive battery fluid must be completely protected to prevent short circuits.

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 listed above are not subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Re-authorization Act. The items are covered in an exemption as a “Manufactured Article”. 372.30(b).

**DOT REGULATIONS:** 49 CFR 173.159

**EPA REGULATIONS:** 40 CFR 266.80

**OSHA REGULATIONS:** 29 CFR 1910.1200