

## MATERIAL SAFETY DATA SHEET

MSDS Number: 06  
Revised October 2012

### 1. PRODUCT IDENTIFICATION

PROPER SHIPPING NAME                    **Battery fluid, Acid**  
 CHEMICAL FAMILY :                        Acid, Corrossive  
 PRODUCT NAME :                          Motorcycle charged battery Electrolyte-sulfuric Acid  
 SYNONYMS :                                Sulfuric Acid  
 UN Number :                                2796

EMERGENCY TELEPHONE NO.            CHEMTREC (International) Phone: 1-703-527-3887  
    CHEMTREC (US, CA and Mexico) Phone: 1-800-424-9300

### 2. HAZARDOUS INGREDIENTS

COMPONENTS	%(Optina)	CAS number	Air exposure Limits (µg/m <sup>3</sup> )			LD50 Oral (mg/kg)
			ACGIH TLV	OSHA	NIOSH	
Sulfuric Acid(H <sub>2</sub> SO <sub>4</sub> )	30-40	7664-93-9	200	1000	1000	2140
Water (H <sub>2</sub> O)	60-70					

### 3. PHYSICAL DATA

COMPONENTS	DENSITY	BOILING POINT	SOLUBILITY (H <sub>2</sub> O)	ODOUR	APPEARANCE
Sulfuric Acid(H <sub>2</sub> SO <sub>4</sub> )	1.28-1.33	105°C -120°C 221°F-248°F	100%	Sharp, penetrating, pungent odour	Clear Colourless liquid

### 4. FLAMMABLE DATA

COMPONENTS	FLASHPOINT	EXPLOSIVE LIMITS	COMMENTS
Sulfuric Acid(H <sub>2</sub> SO <sub>4</sub> )	None	None	Water applied to sulphuric acid generates heat and causes acid to splatter. Wear full-covered sulphuric acid resistant clothing. In case of fire: CO <sub>2</sub> , foam, dry chemical.

### 5. REACTIVITY DATA

#### Sulfuric Acid

- Stability: Stable
- Incompatibility: Contact with metals may produce toxic sulphur dioxide fumes and/or hydrogen gas.
- Decomposition Products: Sulphuric trioxide, carbon monoxide, sulphuric acid fumes, sulphur dioxide.
- Condition to avoid: Contact with organic metals, combustibles, strong reducing agents, metals, strong oxidizers and water.

## 6. HEALTH HAZARD DATA

<b>Routes of entry:</b> Harmful by all routes of entry.
<b>Inhalation:</b> Breathing sulphuric acid vapors and mists may cause severe respiration problems.
<b>Skin contact</b> Severe irritation, burns and ulceration.
<b>Ingestion:</b> May cause severe irritation of the mouth, throat, esophagus, and stomach.
<b>Acute Health Hazards:</b> Severe skin irritation, burns, damage to cornea may cause blindness, upper respiratory irritation.
<b>Eye Contact</b> Severe irritation, burns, cornea damage and blindness
<b>Chronic health Hazards</b> Possible scarring of the cornea, inflammation of the nose, throat and bronchial tubes, possible erosion of tooth enamel.
<b>Medical conditions generally aggravated by exposure</b> Contact of battery electrolyte(acid) with the skin may aggravate skin diseases such as eczema and contact dermatitis. Overexposure to sulphuric mist may cause lung damage and aggravate pulmonary conditions.

### Emergency and First Aid procedures

**Inhalation:** Remove to fresh air immediately. If breathing is difficult, give oxygen.

**Ingestion:** Do not induce vomiting, consult a physician immediately.

**Eyes:** Flush immediately with water for 15 min, consult a physician.

**Skin:** Flush with large amounts of water for at least 15 min., remove any contaminated clothing. If irritation develops seek medical attention.

## 7. CARCINOGENICITY

### **Carcinogenicity**

The National Toxicological Program (NTP) and The International Agency for Research on Cancer (IARC) have classified strong inorganic acid mist containing sulfuric acid as a Category 1 carcinogen, a substance that is carcinogenic to humans. The ACGIH has classified strong inorganic acid mist containing sulfuric acid as an A2 carcinogen (suspected human carcinogen). These classifications do not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist.

## 8. PRECAUTIONS FOR SAFE HANDLING AND USE

### **Spill or Leak Procedures**

In case the release occurs, stop flow of material: contain/absorb small spills with dry sand, earth, and vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of un-neutralized acid to sewer.

### **Waste Disposal Method**

Place neutralized slurry in scaled containers and dispose of as hazardous waste, as applicable. Large water-diluted spills, after neutralization and testing should be managed in accordance with local, state and federal requirements. Consult state environment agency and/ or federal EPA.

### **Handling and Storing**

Handle cautiously, avoid contact with skin and eyes. Storage and handling areas should be equipped with proper containment to capture and neutralize spills. In addition, these areas should be equipped with eyewash stations and safety showers.

**Precautionary labelling:** Poison- causes severe burns DANGER contains sulphuric ACID

## **9. ECOLOGICAL INFORMATION**

Sulfur acid can pose a threat if released to the environment.

See Waste Disposal Method in Section 8.

## **10. CONTROL MEASURES**

### **Engineering Controls:**

Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid resistant

### **Respiratory Protection:**

None required under normal conditions. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.

**Personal Protection and Equipment:** None needed under normal conditions. If battery case is damaged,

- Protective gloves: use rubber or plastic acid-resistant gloves with elbow-length gauntlet.
- Eye protection: use chemical goggles or face shield.
- Other protection: Acid-resistant apron. Under severe exposure or emergency conditions, wear acid –resistant clothing and boots.
- In areas where sulfuric acid is handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

## **11. NFPA HAZARD RATING FOR SULFURIC ACID**

- A. Not applicable under normal conditions.
- B. In case of damage resulting in breakage of the battery container, see section10, personal protection and equipment.

Flammability (Red) 0

Health (Blue) 3

Reactivity (Yellow) 2

## **12. TRANSPORTATION REGULATIONS ( non-restricted status)**

**Proper Shipping Name: Battery fluid, Acid**

**Class/division : 8**

**UN number : UN 2796**  
**Packing Group : II**  
**Label : Corrosive**

**International Shipments**

The transportation of electrolyte is regulated by the International Air Transport Association (IATA). These regulations classify electrolyte as Hazardous material. Electrolyte must be packed according to the IATA packing Instruction Y840 for LQ and/or 851.

The transportation of electrolyte is regulated by the International Maritime Dangerous Goods Code (IMDG) These regulations classify electrolyte as Hazardous material. Electrolyte must be packed according to the IMDG Code page 8230.

**13. Regulatory Information**

**RCRA**

Spilled Sulfuric acid is a hazardous waste ; EPA hazardous waste number 002 (corrosives)

**CERCLA (superfund) and EPCRA**

- (a) Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (superfund) and EPCRA (Emergency Planning Community Right to Know Act) is 1,000lbs. State and local reportable quantities for spilled sulfuric acid may vary.
- (b) Sulfuric acid is a listed “Extremely Hazardous Substance” under EPCRA with a Threshold Planning Quantity (TPQ) of 1,000lbs.
- (c) EPCRA Section 302 Notification is required if 1,000lbs. or more of sulfuric acid is present at one site. The quantity of sulfuric acid will vary by battery type. Contact DC-AFAM Corporation for additional information.
- (d) EPCRA Section 312 Tier 2 reporting is required for batteries if sulfuric acid is present in quantities of 500lbs. or more and/or lead is present in quantities of 10,00lbs. or more.
- (e) Supplier Notification: This product contains toxic chemicals which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39 the following information is provided to enable you to complete the required reports:

Toxic Chemical	CAS number	Approx. % by weight
Lead	7439-92-1	60
Sulfuric Acid	7664-93-9	10-30
Arsenic	7440-38-2	<0.01

If you distribute this product to other manufacturers in SIC codes 20 through 39, this information must be provided with the first shipment in a calendar year. The Section 313 supplier notification requirement does not apply to batteries which are “consumer products”. Not present in all battery types. Contact DC AFAM Corporation for further information.

**TSCA**

Components	CAS Number	TSCA status
Electrolyte Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	7664-93-9	Listed

**14. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide.