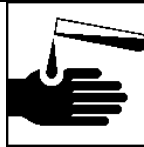
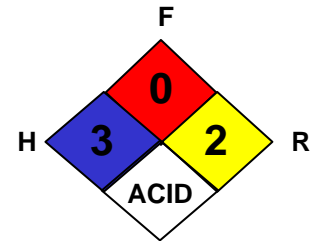




CONCORDE BATTERY BATTERY ELECTROLYTE



HAZARD RATING



MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER'S NAME: CONCORDE BATTERY CORPORATION	EMERGENCY TELEPHONE NO.: CHEMTEL 800-255-3924
ADDRESS: 2009 San Bernardino Rd., West Covina, CA 91790	OTHER INFORMATION CALLS: 626-813-1234
PERSON RESPONSIBLE FOR PREPARATION: Gonzalo Ramos, Safety, Health & Environmental Affairs Manager	Revision Date: OCTOBER 6, 2008

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

C.A.S.	PRINCIPAL HAZARDOUS COMPONENT(S) (chemical & common name(s))	Hazard Category	%	ACGIH TLV	OSHA PEL-TWA
7664-93-9	Sulfuric Acid (Battery Electrolyte)	Reactive-Oxidizer Acute-Chronic	38	1.0 mg/m ³	1.0 mg/m ³
7732-18-5	Water	NA	62	Not Applicable	Not Applicable

NOTE: PEL's for individual states may differ from OSHA PEL's. Check with local authorities for the applicable state PEL's.
 OSHA - Occupational Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; NIOSH - National Institute for Occupational Safety and Health.

COMMON NAME: (Used on label) Battery electrolyte, Sulfuric acid solution
 (Trade Name & Synonyms)

Chemical Family: Inorganic acid

Chemical Name: Battery electrolyte

Formula: Sulfuric acid and water

SECTION 3 - HAZARD IDENTIFICATION

Signs and Symptoms of Exposure	1. Acute Hazards	Electrolyte - Electrolyte is corrosive and contact may cause skin irritation and chemical burns. Electrolyte causes severe irritation and burns of eyes, nose and throat. Ingestion can cause severe burns and vomiting.			
2. Subchronic and Chronic Health Effects	Electrolyte - Repeated contact with sulfuric acid battery electrolyte fluid may cause drying of the skin that may result in irritation, dermatitis, and skin burns. Repeated exposure to sulfuric acid mist may cause erosion of teeth, chronic eye irritation and/or chronic inflammation of the nose, throat and lungs. California Proposition 65 Warning: During charging of a battery, strong inorganic acid mists containing sulfuric acid are evolved, a chemical Known to the State of California to cause cancer. Wear protective equipment when handling.				
Medical Conditions Generally Aggravated by Exposure	If material is spilled, then persons with the following medical conditions must take precautions: pulmonary edema, bronchitis, emphysema, dental erosion and tracheobronchitis.				
Routes of Entry	Inhalation - YES Ingestion - YES	Eye Contact - YES Skin Contact - YES			
Chemical(s) Listed as Carcinogen or potential Carcinogen	Proposition 65 - YES		National Toxicology Program - YES	I.A.R.C. Monographs - YES	OSHA - NO

SECTION 4 - FIRST AID MEASURES

Emergency and First Aid Procedures	Contact with acid if container is opened, broken or spilled.
1. Inhalation	Remove to fresh air and provide medical oxygen/CPR if needed. Obtain medical attention.
2. Eyes	Immediately flush with water for at least 15 minutes, hold eyelids open. Obtain medical attention.
3. Skin	Flush contacted area with large amounts of water for at least 15 minutes while removing contaminated clothing and obtain medical attention if necessary. Excess acid on skin can be neutralized with a 2% solution of bicarbonate of soda.
4. Ingestion	Do not induce vomiting. If conscious drink large amounts of water/milk. Obtain medical attention. Never give anything by mouth to an unconscious person.

SECTION 5 - FIREFIGHTING MEASURES

Flash Point	Not Applicable	Flammable Limits in Air % by Volume	Lower NA	Upper NA	Extinguisher Media	Class ABC, CO ₂ .	Auto-Ignition Temperature	NA
Special Fire Fighting Procedures	The acid mist and vapors generated by heat or fire are corrosive. Use NIOSH approved self-contained breathing apparatus (SCBA) and full protective equipment operated in positive-pressure mode. Use acid protective clothing. May release sulfuric acid, sulfur dioxide gas, carbon monoxide during fire. Water mixed with acid may generate heat and possible splattering.							
Unusual Fire and Explosion Hazards	Hydrogen gas and sulfuric acid mists are generated upon overcharge of a battery and polypropylene case failure. Ventilate charging areas as per ACGIH <u>Industrial Ventilation: A Manual of Recommended Practice</u> and <u>National Fire Code</u> , 1980 Vol. 1, P. 12, B-9, 10. Hydrogen gas may be flammable or explosive when mixed with air, oxygen, and chlorine. Avoid open flames/sparks/other sources of ignition near battery. To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries and do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries. SULFURIC ACID REACTS VIOLENTLY WITH WATER/ORGANICS.							

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Stop release, if possible. Avoid contact with any spilled material. Contain spill, isolate hazard area, and deny entry. Limit site access to emergency responders. Neutralize any spilled electrolyte with sodium bicarbonate, soda ash, lime or other neutralizing agent until fizzing stops. CAUTION: CARBON DIOXIDE GAS IS EVOLVED DURING NEUTRALIZATION REACTION. When the reaction stops the pH should be neutral at 6-8. Collect residue and place in a suitable container (polypropylene). Residue may be hazardous waste. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Un-neutralized electrolyte may require disposal as an EPA D002 corrosive waste. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

Personal Precautions: Acid resistant aprons, boots and protective clothing. ANSI approved safety glasses with side shields/face shield recommended. Ventilate enclosed areas.

Environmental Precautions: Sulfuric acid can pose a severe threat to the environment. Contamination of water, soil, and air should be prevented.

SECTION 7 - HANDLING AND STORAGE

Precautions to be Taken in Handling and Storage	Avoid contact with metals and combustibles.
Other Precautions	GOOD PERSONAL HYGIENE AND WORK PRACTICES ARE MANDATORY. Refrain from eating, drinking or smoking in work areas. Thoroughly wash hands, face, neck, and arms before eating, drinking or smoking. Launder soiled clothing before reuse. Emptied batteries contain hazardous sulfuric acid residue.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection (Specify Type)	Acid gas NIOSH approved respirator is required when the PEL is exceeded or employee experiences respiratory irritation. When exposure levels are unknown or when firefighting, wear a self-contained breathing apparatus with a full facepiece operated in positive pressure mode.				
Ventilation	Must be provided when charging batteries in an enclosed area. Change air every 15 min.	Local Exhaust	When PEL is exceeded.	Mechanical (General)	Normal mechanical ventilation recommended for stationary battery applications.
Protective Gloves	Wear rubber or plastic acid resistant gloves with elbow length gauntlet when filling batteries.	Eye Protection	ANSI approved safety glasses with side shields/face shield recommended. Safety goggles.		
Other Protective Clothing or Equipment	Ventilation as described in the <u>Industrial Ventilation Manual</u> produced by the American Conference of Governmental Industrial Hygienists, shall be provided in areas where exposures are above the PEL or TLV specified by OSHA or other local, state and federal regulations. Acid-resistant rubber or plastic apron, boots and protective clothing. Safety shower and eyewash.				

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	Electrolyte Approx. 235° F	Vapor Pressure	Electrolyte 1 mm Hg @ 145.8° F	Specific Gravity	Electrolyte (H ₂ O = 1) 1.285 +/- .010 pH < 2	Melting Point	NA
Percent Volatile by Volume (%)	Not Applicable	Vapor Density	Hydrogen (Air = 1): 0.069 Electrolyte (Air = 1): 3.4	At STP	Evaporation Rate	Not Applicable	
Solubility in Water	Electrolyte: 100% Soluble			Reactivity in Water	Electrolyte - water reactive (1) Exothermic		
Appearance and Odor	Electrolyte: Liquid, colorless, oily fluid; nuisance odor when hot or charging battery.						

SECTION 10 - STABILITY AND REACTIVITY

Stability	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>	Conditions to Avoid	Reacts violently with water with evolution of heat. Corrosive to metals.
Incompatibility (Materials to Avoid)	Organic materials, chlorates, carbides, fulminates, water, metals		
Hazardous Decomposition Products	May release sulfuric acid and mist, sulfur dioxide gas, carbon monoxide		
Hazardous Polymerization	May Occur <input type="checkbox"/> Will Not Occur <input checked="" type="checkbox"/>	Do not overcharge a battery.	

SECTION 11 - TOXICOLOGICAL INFORMATION

CHRONIC: CARCINOGENICITY:

The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a category 1 carcinogen, a substance that is carcinogenic to humans. "The National Toxicology Program (NTP) has designated strong inorganic sulfuric acid mists as a known human carcinogen." This classification does 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 a battery containing battery electrolyte, may however result in the generation of sulfuric acid mist.

SECTION 12 - ECOLOGICAL INFORMATION

Avoid contact with water bodies.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Battery electrolyte is a hazardous waste by the characteristic of corrosivity. For neutralized spills, place residue in acid-resistant containers with sorbent material, sand or earth and dispose of in accordance with local, state and federal regulations for acid compounds. Contact local and/or state environmental officials regarding disposal information. Acid contained in scrap batteries will be recycled and beneficially reused if the battery is handled through a lead-recycling program.
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SECTION 14 - TRANSPORT INFORMATION

Note: The shipper has the option of shipping the acid packs Hazmat regulated under UN2796. Additional labeling and paperwork would be required OR the shipper may ship the acid packs using the ORM-D Consumer Commodity exception. See CFR 49 and IATA Dangerous Goods Regulations for more information.

Consumer Commodities: ORM-D Shipments

Excepted from labeling unless offered or intended for transport by aircraft.

Excepted from specification packaging when packaged in combination packaging

Excepted from placarding in these limited quantities

Excepted from shipping paper requirements unless offered or intended for transportation by aircraft

Package is properly marked on at least 1-side or end with the ORM-D designation immediately following or below the proper shipping name of the material

U.S. DOT PROPER SHIPPING NAME: Battery fluid, acid

U.S. DOT HAZARD CLASS: 8

U.S. DOT ID NUMBER: UN 2796

U.S. DOT PACKING GROUP: II

U.S. DOT LABEL: Corrosive

IMO PROPER SHIPPING NAME: Battery fluid, acid

IMO U.N. CLASS: 8

IMO U.N. NUMBER: UN 2796

IMO PACKING GROUP: II

IMO LABEL: Corrosive

IMO VESSEL STOWAGE: B

IATA PROPER SHIPPING NAME: Battery fluid, acid

IATA U.N. CLASS: 8

IATA U.N. NUMBER: UN 2796

IATA PACKING GROUP: II

IATA LABEL: Corrosive

ERG Code: 8L

SECTION 15 - REGULATORY INFORMATION

U.S. Hazardous Under Hazard Communication Standard:

Sulfuric Acid - YES

Ingredients Listed on TSCA Inventory:

YES

CERCLA Section 304 Hazardous Substance:

Sulfuric Acid – YES

RQ: 1000 pounds

EPCRA Section 302 Extremely Hazardous Substance:

Sulfuric acid - YES

EPCRA Section 313 Toxic Release Inventory:

Sulfuric Acid - CAS NO: 7664-93-9

SECTION 16 - OTHER INFORMATION

THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, CONCORDE MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. ALTHOUGH REASONABLE PRECAUTIONS HAVE BEEN TAKEN IN THE PREPARATION OF THE DATA CONTAINED HEREIN, IT IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION. THIS MATERIAL SAFETY DATA SHEET PROVIDES GUIDELINES FOR THE SAFE HANDLING AND USE OF THIS PRODUCT; IT DOES NOT AND CANNOT ADVISE ON ALL POSSIBLE SITUATIONS, THEREFORE, YOUR SPECIFIC USE OF THIS PRODUCT SHOULD BE EVALUATED TO DETERMINE IF ADDITIONAL PRECAUTIONS ARE REQUIRED.

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FORM MSDS REV. 10/6/2008

