


MOTIVE POWER DIVISION

P o w e r S o l u t i o n s

MATERIAL SAFETY DATA SHEET
SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTITY: Sulfuric Acid, Battery Electrolyte for C-Line, V-Line, Eclipse CDID: 1.285 Specific Gravity EMERGENCY: (610) 828-9309 24 HOUR EMERGENCY TELEPHONE: (CHEM TEL) 1-800-255-3924	MANUFACTURER NAME: C & D Technologies, Inc. ADDRESS: 1400 Union Meeting Road P. O. Box 3053 Blue Bell, PA 19422-0858 TELEPHONE: (215) 619-2700
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SECTION II: COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENT	CAS#	OSHA PEL	ACGIH TLV	% BY WEIGHT
*SULFURIC ACID	7664-93-9	1.0mg/ m3	1.0mg/ m3	38%
SECTION 313 (40CFR372) LISTED TOXIC CHEMICALS ARE PRECEDED BY AN *				
NON-HAZARDOUS INGREDIENTS				
Water	7732-18-5	N/A	N/A	62%

SECTION III: HAZARDS IDENTIFICATION

APPEARANCE AND ODOR: Liquid, Colorless, Oily Fluid, Vapors are Colorless; Acid odor when hot or charging.	Rating Codes:	0=Insignificant	1=Slight	2=Moderate
		3=High	4=Extreme	
	HMIS RATING:	Health: 3	Flammability: 0	Reactivity: 2
		Other: 0		
	NFPA RATING:	Health: 3	Flammability: 0	Reactivity: 2
	Other: CORR			
ROUTES OF ENTRY: Inhalation X Skin X Ingestion X TARGET ORGANS: Skin, Eyes, Upper Respiratory Track				
HEALTH HAZARDS (ACUTE AND CHRONIC): ACUTE: Tissue destruction on contact. May cause 2nd and 3rd degree burns or blindness. Ingestion will cause corrosive burns on contact. May be fatal if swallowed. CHRONIC: Inhalation of mists may cause upper respiratory irritation and pulmonary edema. SIGNS AND SYMPTOMS OF OVEREXPOSURE: Irritation or burning of exposed tissues.				
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory disorders may be aggravated by prolonged inhalation of mists.				

SECTION IV: FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:	
SKIN / EYES -Flush with water for 15 minutes. -Remove contaminated clothing -If irritation continues, seek medical attention.	INGESTION Do not induce vomiting Drink large quantities of milk or water Give CPR if breathing has stopped Seek medical attention immediately

SECTION V: FIREFIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES:

Flash Point: N/A	Flammable Limits:	LEL: N/A	UEL: N/A
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UNUSUAL FIRE AND EXPLOSION HAZARDS: Hydrogen gas may be present when used in a battery. Hydrogen gas and acid mist is generated upon overcharge or in a fire. Ventilate area.

EXTINGUISHING MEDIA: Dry Chemical, Halon, or Carbon Dioxide

SPECIAL FIREFIGHTING PROCEDURES: Ventilate the area well. SCBA and acid protective clothing are recommended.

SECTION VI: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Neutralize any spilled electrolyte with soda ash or sodium bicarbonate until fizzing stops. When the reaction stops the pH should be neutral at 6-8. Collect Residue and place in a suitable container. Residue may be hazardous waste. Keep untrained individuals away from the spilled material. Provide adequate ventilation, hydrogen gas may be given off during neutralization.

CONTAINMENT: Contain large spills with earth or clay dikes.

SECTION VII: HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS:

- Add water to acid after neutralization to avoid excessive heat generation.
- Store in cool, dry area away from reactives and combustibles.
- Do not store in sealed, unventilated areas.
- Provide secondary containment if large volumes are stored.

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: General room ventilation is sufficient during normal use and handling. Do not install these batteries in a sealed, unventilated area.

PERSONAL PROTECTIVE EQUIPMENT(IN THE EVENT OF BATTERY BREAKAGE):

Eye Protection: chemical goggles or safety glasses with sideshields and a full-face shield.	Protective gloves: rubber or neoprene	Respiratory protection: NIOSH approved acid mist respirator, if OSHA PEL is exceeded or respiratory irritation occurs.	Other Protective Equipment: acid resistant apron or clothes.
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WORK PRACTICES: Maintain eyewash and drench shower in area.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 235F	SPECIFIC GRAVITY: 1.285+/-0.010	VAPOR PRESSURE: 145.8/mm
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MELTING POINT: N/A	VAPOR DENSITY: (Air=1)>1	SOLUBILITY IN WATER: 100%
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EVAPORATION RATE: (Water = 1):<1	APPEARANCE /ODOR: At normal temperatures: Clear, colorless liquid/Acid smell
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SECTION X: STABILITY AND REACTIVITY

STABILITY: This is a stable material.

INCOMPATIBILITY(MATERIALS TO AVOID): -Metals and combustibles

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Hydrogen gas, Sulfur Trioxide may be generated during battery overcharge conditions, in fire and at high temperatures. In fire may emit CO, CO₂ and Sulfides.

HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

SECTION XI: TOXICOLOGICAL INFORMATION

LD 50 INFORMATION:	Test Animal:	Rat
	Dose:	2140 mg/kg
	Administrative Route:	Oral
LDLo INFORMATION:	Test Animal:	Man
	Dose:	135 mg/kg
	Administrative Route:	Unreported
LC50 INFORMATION:	Test Animal:	Rat
	Dose:	510 mg/m3
	Length of Exposure:	Inhalation
EFFECT ON EYES / SKIN: Corrosive		
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, may however result in the generation of Sulfuric Acid mist at higher levels.		

SECTION XII: ECOLOGICAL INFORMATION

Sulfuric Acid can pose a threat if released to the environment. See waste disposal method in Section XIII.

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: This battery electrolyte is a hazardous waste by the characteristic of corrosivity. Follow proper disposal methods as allowed by your local ordinances and site permits. Acid contained in scrap batteries will be recycled and beneficially reused if the battery is handled through the C&D lead-recycling program. Contact your C&D sales representative for more information.

RCRA WASTE DISPOSAL NO.: D002

SECTION XIV: TRANSPORT INFORMATION

FOR DOMESTIC, CANADIAN AND EXPORT SHIPMENTS:

PROPER SHIPPING NAME: Battery Fluid, Acid **UN OR NA IDENTIFICATION NUMBER:** UN2796

HAZARD CLASS: 8

LABEL: Corrosive **PACKING GROUP:** II **EMERGENCY RESPONSE GUIDE:** 157

SECTION XV: REGULATORY INFORMATION

See 29 CFR 1910.268(b)(2)

SECTION XVI: OTHER INFORMATION

The information herein is given in good faith, but no warranty, expressed or implied, is made.

MSDS Preparation / Review Date: 3/1/2010

Revision Number: 23

Prepared by: W. Kozlowski