Product ID:LEAD-ACID BATTERY MSDS Date:06/01/1999 FSC:6140 NIIN:01-102-1642 **MSDS Number: CKFYS** === Responsible Party === Company Name: EXIDE CORP Address:645 PENN STREET Box:14205 City:READING State:PA ZIP:19612-4205 Country:US Info Phone Num:610-378-0500/0798 Emergency Phone Num:800-424-9300 Resp. Party Other MSDS Num.: EV-DBATLA.1 Chemtrec Ind/Phone:(800)424-9300 CAGE:20038 === Contractor Identification === Company Name: CELL ENERGY INC Address:3190-B ORANGE GROVE AVE Box:City:NORTH HIGHLANDS State:CA ZIP:95660-5706 Country:US Phone:916-484-7974 Contract Num:SP0430-00-M-KB91 CAGE:1U269 Company Name: CELL ENERGY INC Address:3190-B ORANGE GROVE AVE Box:City:NORTH HIGHLANDS State:CA ZIP:95660-5706 Country:US Phone:916-484-7974 Contract Num:SPO-430-01-M-G943 CAGE:1U269 Company Name: EXIDE CORP Address:645 PENN STREET Box:14205 City:READING State:PA ZIP:19612-4205 Country:

US Phone:610-378-0500/0798 CAGE:20038 Company Name: EXIDE CORP.-GENERAL BATTERY CORP Address:645 PENN STREET Box:City:READING State:PA ZIP:19601 Country:US Phone:215-378-0527/800-424-9300(CHEMTREC) CAGE:08163 Ingred Name:LEAD CAS:7439-92-1 RTECS #: OF7525000 = Wt:53. OSHA PEL:50 UG/M3 ACGIH TLV:0.15 MG/M3 EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB Ingred Name:ANTIMONY CAS:7440-36-0 RTECS #:CC4025000 = Wt:.2 OSHA PEL:0.5 MG/M3 ACGIH TLV :0.5 MG/M3 EPA Rpt Qty:5000 LBS DOT Rpt Qty:5000 LBS Ingred Name:ARSENIC CAS:7440-38-2 RTECS #:CG0525000 Fraction by Wt: 0.003% OSHA PEL:10 UG/M3 ACGIH TLV:0.01 MG/M3 EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB Ingred Name:CALCIUM CAS:7440-70-2 RTECS #:EV8040000 = Wt:.02 Ingred Name:TIN CAS:7440-31-5 RTECS #:XP7320000 = Wt:.06 OSHA PEL:2 MG/M3 ACGIH TLV:2 MG/M3 Ingred Name:SULFURIC ACID (ELECTROLYTE) CAS:7664-93-9 RTECS #:WS5600000 Minumum % Wt:30.

Maxumum % Wt:40.

CGIH STEL:3 MG/M3 EPA Rpt Qty:1000 LBS DOT Rpt Qty:1000 LBS

Ingred Name:POLYPROPYLENE (CASE MATERIAL- MAY BE HARD RUBBER INSTEAD) CAS:9003-07-0 RTECS #:UD1842000 Minumum % Wt:5. Maxumum % Wt:6.

Ingred Name:HARD RUBBER (CASE MATERIAL - MAY BE POLYPROPYLENE INSTEAD) Minumum % Wt:5. Maxumum % Wt:6.

LD50 LC50 Mixture:NO DATA PROVIDED BY RESPONSIBLE PARTY. Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carci nogenicity:NTP:YES IARC:YES

Health Hazards Acute and Chronic:LEAD: HAZARDOUS EXPOSURE CAN OCCUR ONLY WHEN PRODUCT IS HEATED ABOVE THE MELTING POINT, OXIDIZED OR OTHERWISE PROCESSED OR DAMAGED TO CREATE DUST, VAPOR OR FUME. INHALATION MAY CAUSE SEVERE REPIRATORY IRRITATION. INGESTION MAY LEAD TO SYSTEMIC TOXICITY. LEAD COMPOUNDS ARE NOT ABSORBED THOUGH THE SKIN. EYE CONTACT MAY CAUSE EYE IRRITATION. ELECTROLYTE: INHALATION OF SULFURIC VAPORS OR MISTS MAY CA USE SEVERE RESPIRATORY IRRITATION. INGESTION MAY CAUSE SEVERE RESPIRATORY IRRITATION. INGESTION MAY CAUSE SEVERE IRRITATION, BURNS AND ULCERATION. EYE CONTACT: MAY CAUSE SEVERE IRRITATION, CORNEA DAMAGE, BLINDNESS.

Explanation of Carcinogenicity:IARC LISTS LEAD COMPOUNDS AS LIKELY CARCINOGEN IN ANIMALS, LACKING PROOF IN HUMANS. ARSENIC IS LISTED BY NTP, IARC AND OSHA AS A CARCINOGEN. IARC LISTS "STRONG INORGANIC MIST CONTAINING SULFURIOC ACID " AS A CATEGORY

1 CARCINOGEN; HOWEVER THIS DOES NOT APPLY TO SULFURIC ACID SOLUTIONS OR TO ELECTROLYTE IN BATTERIES.

Effects of Overexposure:ACUTE: SEVERE SKIN IRRITATION, DAMAGE TO CORNEA MAY CAUSE BLINDNESS, UPPER RESPIRATORY IRRITATION. SYMPTOMS OF TOXICITY INCLUDE HEADACHE, FATIGUE, ABDOMINAL PAIN, LOSS OF APPETITE, MUSCULAR ACHES AND WEAKNESS, SLEEP DISTURBANCES AND IRRITABILITY. CHRONIC: POSSIBLE EROISION OFTOOTH ENAMEL; INFLAMMATION OF NOSE, THROAT AND BRONCHIAL TUBES. ANEMI A;

NEUROPATHY, PARTICULARY OF THE MOTOR NERVES, WITH WR IST DROP; KIDNEY DAMAGE; REPRODUCTIVE CHANGES IN BOTH MALES AND FEMALES. Medical Cond Aggravated by Exposure:OVEREXPOSURE TO ELECTROLYTE MIST MAY CAUSE LUNG DAMAGE & AGGRAVATE PULMONARY CONDITIONS. CONTACT OF ELECTROLYTE WITH SKIN MAY AGGRAVATE SKIN DISEASES SUCH AS ECZEMA & DERMATITIS. (SEE SUPPLEMENTAL)

First Aid:INHALATION: REMOVE TO FRESH AIR IMME

DIATELY. IF BREATHING IS

DIFFICULT, GIVE OXYGEN. LEAD:REMOVE FROM EXPOSURE, GARGLE, WASH NOSE AND LIPS; CONSULT PHYSICIAN. INGESTION: GIVE LARGE QUANTITIES OF WATER ; DO NOT INDUCE VOMITING; CONSULT PHYSICIAN. SKIN: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES; REMOVE CONTAMINATED CLOTHING COMPLETELY, INCLUDING SHOES. EYES-ELECTROLYTE (WATER AND SULF URIC ACID SOLUTION) AND LEAD: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES; CONSU

LT

PHYSICIAN IMMEDIATELY.

Lower Limits:4.1%

Upper Limits:74.2%

Extinguishing Media:CO2; FOAM; DRY CHEMICAL.

Fire Fighting Procedures:USE POSITIVE PRESSURE, SCBA. BEWARE OF ACID SPLATTER DURING WATER APPLICATION AND WEAR ACID-RESISTANT CLOTHING, GLOVES, FACE AND EYE PROTECTION. IF BATTERIES ARE ON CHARGE, SHUT OFF POWER TO THE CHARG ING EQUIPMENT, BUT, NOTE THAT STRINGS OF SERIES CONNECTED BATTERIES MAY STI

LL POSE RISK OF ELECTRIC SHOCK.

Unusual Fire/Explosion Hazard: IN OPERATION, BATTERIES GENERATE & RELEASE FLAMMABLE HYDROGEN GAS. THEY MUST ALWAYS BE ASSUMED TO CONTAIN THIS GAS WHICH, IF IGNITED BY BURNING CIGARETTE, NAKED FLAME OR SPARK, MAY CAUSE BATTERY EXPLO SION WITH DISPERSION OF CASING FRAGMENTS & CORROSIVE LIQUID ELECTROLYTE. CAREFULLY FOLLOW MANUFACTURER'S INSTRUCTIONS.

Spill Release Procedures:STO

P FLOW OF MATERIAL, CONTAIN/ABSORB SMALL SPILLS WITH DRY SAND, EARTH, VERMICULITE. DO NOT USE COMBUSTIBLE MATERIALS. WEAR ACID-RESISTANT CLOTHING, BOOTS, GLOVES, AND FACE SHIELD. DO NOT ALLOW DISCH ARGE OF UNNEUTRALIZED ACID TO SEWER. NEUTRALIZED ACIDS MUST BE MANAGED IN ACCORDANCE WITH APPROVED LOCAL, STATE AND FEDERAL REQUIREMENTS. CONSULT STATE ENVIRONMENTAL AGENCY AND/OR FEDERAL EPA. Neutralizing Agent:IF POSSIBLE, CAREFULLY NEUTRALIZE SPILLED ELECTROLYTE WITH SOD A ASH, SODIUM BICARBONATE, LIME, ETC

Handling and Storage Precautions:STORE BATTERIES UNDER ROOF IN COOL, DRY, WELL-VENTILATED AREAS WHICH ARE SEPARATED FROM INCOMPATIBLE MATERIALS & FROM ACTIVITIES WHICH MAY CREATE FLAMES, SPARKS OR HEAT. STORE ON SMOOTH, IMPERVIOUS SU RFACES WHICH ARE PROVIDED WITH MEASURES FOR LIQUID CONTAINMENT IN THE EVENT OF ELECTROLYTE SPILLS. Other Precautions:CHARGING:THERE IS A POSSIB

LE RISK OF ELECTRIC SHOCK

FROM CHARGING EQUIPMENT & FROM STRINGS OF SERIES CONNECTED BATTERIES, WHETHER BEING CHARGED OR NOT. SHUT-OFF POWER TO CHARGERS WHENEVER NOT IN USE & BEFORE DETACHMENT OF ANY CIRCUIT CONNECTIONS. BATTERIES BEING CHARGED WILL GENERATE AND RELEASE FLA MMABLE HYDROGEN GAS.

Respiratory Protection:NONE REQUIRED UNDER NORMAL CONDITIONS. WHEN CONCENTRATIONS OF SULFURIC ACID MIST ARE K

NOWN TO EXCEED PEL, USE

NIOSH OR MSHA-APPROVED RESPIRATORY PROTECTION.

Ventilation: STORE AND HANDLE IN WELL-VENTILATED AREA. IF

MECHANICALVENTILATION IS USED, COMPONENTS MUST BE ACID-RESISTANT. Protective Gloves: RUBBER OR PLASTIC ACID-RESISTANT GLOVES WITH

ELBOW-LENGTH GAUNTLET.

Eye Protection: CHEMICAL GOGGLES OR FACE SHIELD.

Other Protective Equipment:ACID-RESISTANT APRON. UNDER SEVERE EXPOSURE OR EMERGENCY CONDITIONS, WEAR ACID-RESISTANT CLOTHING, GLOVES & BOOTS. EMERGENCY

EYEWASH STATIONS AND SHOWERS. Work Hygienic Practices: HANDLE BATTERIES CAUTIOUSLY, DO NOT TIP TO AVOID SPILLS. MAKE CERTAIN VENT CAPS ARE ON SECURELY. AVOID BODILY CONTACT WITH INTERNAL COMPONENTS. WEAR PROTECTIVE CLOTHING, EYE & FACE PROTECTION, Supplemental Safety and Health MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE (CONTINUED): CONTACT OF ELECTROLYTE WITH EYES MAY CAUSE CORNEA DAMAGE AND/OR BLINDNESS, LEAD AND ITS COMPOUDS CAN AGGRAVATE SOME FORMS OF KIDNEY. LI VER AND CARDIOLOGIC DISEASE. PART NUMBER COM-30H. HCC:C1 Boiling Pt:=95.C, 203.F B.P. Text:203-240 FOR S.G. RANGE Vapor Pres:17 TO 11 FOR S.G. RANGE Vapor Density:>1(AIR=1) Spec Gravity:1.230 TO 1.350 Evaporation Rate & amp; Reference: LESS THAN 1 Solubility in Water:100% Appearance and Odor: CLEAR LIQUID WITH A SHARP, PENETRATING, PUNGENT ODOR. Stabili ty Indicator/Materials to Avoid:YES ELECTROLYTE: COMBUSTIBLES, ORGANICS, STRONG REDUCING AGENTS, METALS, SULFUR TRIOXIDE, STROG OXIDIZERS, WATER. LEAD COMPOUNDS: STROG ACIDS, BASES, HALIDES, HALOGENATES, POTASSIUM NITRATE, PERMANGANATE, PEROXIDES, NASCENT HYD Stability Condition to Avoid: PROLONGED OVERCHARGE AT HIGH CURRENT; SOURCES OF IGNITION. Hazardous Decomposition Products:SULFUR TRIOXIDE, CARBON MONOXIDE, SULFURIC ACID MIST, SULFUR DIOXIDE, HYDROGEN. TEMPERATURES ABOVE THE MELTING POINT ARE LIKELY TO PRODUCE TOXIC METAL FUME, VAPOR OR DUST: ARSINE GAS POSSIBLE. Toxicological Information: NO DATA PROVIDED BY RESPONSIBLE PARTY. Ecological:NO DATA PROVIDED BY RESPONSIBLE PARTY. Waste Disposal Methods: SPENT BATTERIES: SEND TO SECONDARY LEAD SMELTER

FOR RECYCLING. PLACE NEUTRALIZED SLURRY INTO SEALED ACID RESISTANT CONTAINERS & DISPOSE OF AS HAZARDOUS WASTE, AS APPLICABLE. LARGE WATER-DILUTED SPILLS, AFTER NEUTRALIZATION &TESTING, SHOULD BE MANAGED I/A/W APPROVED LOCAL, STATE & FEDERAL REQUIREMENT S. CONSULT STATE ENVIRONMENTAL AGENCY AND/OR FEDER

Transport Information:US DOT: WET (FILLED WITH ELECTROLYTE) BATTERIES ARE REGULATED BY US DOT AS HAZAR

DOUS MATERIAL: PROPER SHIPPING NAME

: BATTERY, WET, FILLED WITH ACID. HAZARD CLASS/DIVISION: 8. UN ID NUMBER: UN2794. PA CKAGING GROUP: III. LABEL REQUIRED: CORROSIVE.

SARA Title III Information:EPCRA RQ (100% SULFURIC) = 1000 LBS. EPCRA LISTS SULFURIC ACID AS AN "EXTREMELY HAZARDOUS SUBSTANCE" WITH A TPQ = 1000 LBS. EPCRA SECTION 302 NOTIFICATION REQUIRED IF 1000 LBS OR MORE SULFURIC ACID IS ON SITE. AN

AVERAGE AUTOMOTIVE BATTERY

CONTAINS 5 LBS SULFURIC ACID. EPCRA TIER 2 REPORTING REQUIRED FOR NON-AUTOMOTIVE BATTERIES IF SULFURIC ACID IS PRESENT IN QUANTITIES OF 500 LBS OR MORE AND/OR L EAD IS PRESENT IN QUATITIES OF 10,000 LBS OR MORE. SEE OTHER SECTIONFOR SARA SECTION 313 SUPPLIER NOTIFICATION.

Federal Regulatory Information:CERCLA RQ (100% SULFURIC) = 1000 LBS. RCRA: SPEENT LEAD ACID BATTEIES ARE NOT REGULATED AS HAZARDOUS WASTE WHEN RECYCLED. SPILLED SULFURIC AC

ID IS AN EPA CHARACTERISTIC

WASTE; EPA HAZARDOUS WASTE NUMB ER DOO2 (CORROSIVITY). TSCA: INGREDIENTS ARE LISTED IN STCA REGISTRY A FOLLOWS: LEAD 7439-91-1; LEAD OXIDE 1317-36-8; LEAD SULFATE 7446-14-2; SULFURIC ACID 7664-93-9; ANTIMONY 7440-36-0; ARSENIC 7440- 38-2; CALCIUM 7440-70-2; TIN 7440-31-5. CAA: EXIDE ESTABLISHED A POLICY TO ELIMINATE THE USE OF CLAS S 1 ODC'S PRIOR TO MAY 15, 1993. State Regulatory Information: WARNING: THIS PRODUCT CONTAINS LEAD, A CHEMICAL

KNOWN TO THE STATE OF CALIFORNIA IS TO CAUSE CANCER OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

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