EXIDE CORP -- LEAD-ACID BATTERY -- 6140-01-355-5089
========== Product Identification ==========

Product ID:LEAD-ACID BATTERY
MSDS Date:02/01/1996
FSC:6140
NIIN:01-355-5089
Status Code:A
MSDS Number: CKLHD
=== 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:610-378-0500
Prepar
er's Name:ENVIRONMENTAL RESOURCES
Chemtrec Ind/Phone:(800)424-9300
CAGE:20038
=== Contractor Identification ===
Company Name:BATTERY OUTLET INC
Address:1608 CAMPOSTELLA RD
Box:City:CHESAPEAKE
State:VA
ZIP:23324
Country:US
Phone:757-545-4442
Contract Num:SP0430-99-M-AJ11
CAGE:0FGN2
Company Name:BATTERY OUTLET INC
Address:1608 CAMPOSTELLA RD
Box:City:CHESAPEAKE
State:VA
ZIP:23324
Country:US
Phone:757-545-4442
Contract Num:SP0430-99-M-F912
CAGE:0FGN2
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

========== Composition/Information on Ingredients ==========

Ingred Name:LEAD (SARA 313) (CERCLA)
CAS:7439-92-1
RTECS #:OF7525000
= Wt:53.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:SEE 1910.1025
ACGIH TLV:0.05MG/M3, A3; 9596
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:ANTIMONY (SARA 313) (CERCLA)
CAS:7440-36-0
RTECS #:CC4025000
= Wt:.2
Other REC Limits:NONE RECOMMENDED
OSHA PEL:0.5 MG/M3
AC
GIH TLV:0.5 MG (SB)/M3; 9596
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:ARSENIC (SARA 313) (CERCLA)
CAS:7440-38-2
RTECS #:CG0525000
Fraction by Wt: 0.003%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:SEE 1910.1018
ACGIH TLV:0.01 MG/M3, A1; 9596
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:CALCIUM, METAL
CAS:7440-70-2
RTECS #:EV8040000
= Wt:.02
Other REC Limits:NONE RECOMMENDED

Ingred Name:TIN
CAS:7440-31-5
RTECS #:XP7320000
= Wt:.06
Other REC Limits:NONE RECOMMENDED
OSHA PEL:2 MG/M3

ACGIH TLV:2 MG/M3; 9596

Ingred Name:SULFURIC ACID (SARA 302/313) (CERCLA) (ELECTROLYTE)
CAS:7664-93-9
RTECS #:WS5600000
Minumum % Wt:30.
Maxumum % Wt:40.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3/3 STEL; 9596
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:POLYPROPYLENE (CASE)
CAS:9003-07-0
RTECS #:TR5000000
Minumum % Wt:5.
Maxumum % Wt:6.
Other REC Limits:NONE RECOMMENDED

Ingred Name:SILICA, CRYSTALLINE - FUSED (GEL CELL BATTERIES ONLY)
CAS:60676-86-0
RTECS
#:VV7328000
Minumum % Wt:3.
Maxumum % Wt:5.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:SEE TABLE Z-3
ACGIH TLV:0.1 MG/M3 RDUST;9596

========== Hazards Identification ==========

LD50 LC50 Mixture:TLV FOR SULFURIC ACID IS 1 MG/M3.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:YES OSHA:NO
Health Hazards Acute and Chronic:ELECTROLYTE (SULFURIC ACID & WATER) IS
HARMFUL BY ALL ENTRY ROUTES. LEAD HAZARDOUS EXPOSURE OCC
URS ONLY
WHEN FUMES, DUST OR VAPOR ARE CREATED: INHALATION: ELECTROLYTE:
SEVERE RESPIRATORY IRRITATION, L EAD: IRRITATION OF UPPER
RESPIRATORY TRACT & LUNGS. INGESTION: ELECTROLYTE: SEVERE
IRRITATION OF MOUTH, THROAT, ESOPHAGUS & STOMACH. LEAD: ABDOMINAL
PAIN, NAUSEA, VOMITING, DIARRHEA, SEVERE CRAMPING, SYSTEMIC
TOXICITY. SKIN: ELECTROLYTE: SEVERE IRRITATION, BURNS & ULCERATION.
LEAD: NOT ABSORBED THROUGH SKIN. EYES: ELECTROLYTE: SEVERE
IRRITATION, BURNS, CORNEA

DAMAGE, BLINDNESS. LEAD: MAY CAUSE EYE
IRRITATION.
Explanation of Carcinogenicity:"STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACD": IARC HAS CLASSIFIED AS A CATAGORY I CARCINOGEN BUT DOES NOT APPLY TO SULFURIC ACID IN STATIC LIQUID STATE OR TO BATTERY ELECTROLYTE. LEAD COMPOUN DS: LISTED AS 2B CARCINOGEN BY IARC. ARSENIC LISTED BY NTP, IAC, OSHA & NIOSH AS A POTENTIAL CARCINOGEN.
Effects of Overexposure:ELECTROLYTE: ACUTE: SEVERE SKIN IRRITATION, DAMAGE TO CORNE
A MAY CAUSE BLINDNESS, UPPER RESPIRATORY IRRITATION.
CHRONIC: POSSIBLE TOOTH EROSION, INFLAMMATION OF NOSE, THROAT & BRONCHIAL TUBES. LEAD: A CUTE-HEADACHE, FATIGUE, ABDOMINAL PAIN,LOSS OF APPETITE, MUSCULAR ACHES AND WEAKNESS, SLEEP DISTURBANCES AND IRRATABILITY. CHRONIC: ANEMIA, NEUROPATHY-PARTICULARLY OF MORTOR NERVES (EG WRIST DROP), KI DNEY DAMAGE, REPRODUCTIVE CHANGES IN BOTH MALES & FEMALES.
Medical Cond Aggravated by Exposure:INORGANIC LEAD AND ITS COMPOUNDS
C
AN AGGRAVATE CHRONIC FORMS OF KIDNEY, LIVER AND NEUROLOGIC DISEASES. SULFURIC ACID MISTS CAN AGGRAVATE SKIN DISEASES SUCH AS ECZEMA, DERMATITIS AND LUNG DISEASES.

========== First Aid Measures ==========

First Aid:INHALED-ELECTROLYTE: REMOVE TO FRESH AIR IMMEDIATELY. IF BREATHING DIFFICULT, GIVE OXYGEN. LEAD: REMOVE FROM EXPOSURE, GARGLE, WASH NOSE & LIPS. CONSULT PHYSICIAN. INGESTED-ELECTROLYTE: GIVE LARGE QUA NTITIES OF WATER. DO NOT INDUCE VOM
ITING! CONSULT
PHYSICIAN. LEAD: CONSULT PHYSICIAN IMMEDIATELY. SKIN-ELECTROLYTE: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTH ES COMPLETELY, INCLUDING SHOES. LEAD: WASH IMMEDIATELY WITH SOAP & WATER. EYES-ELECTROLYTE: FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. CONSULT PHYSICIAN IMMEDIATELY.

========== Fire Fighting Measures ==========

Lower Limits:4.1 HYDROGEN
Upper Limits:74.2
Extinguishing Media:CA

RBON DIOXIDE (CO2), FOAM, DRY CHEMICAL.
Fire Fighting Procedures:USE SELF-CONTAINED BREATHING APPARATUS & ACID-RESISTANT CLOTHING, GLOVES, FACE & EYE PROTECTION. BEWARE OF ACID SPLATTERING. IF BATTERIES ARE ON CHARGE, SHUT OFF POWER TO CHARGING EQUIPMENT.
Unusual Fire/Explosion Hazard:DURING OPERATIONS, BATTERIES GENERATE & RELEASE FLAMMABLE HYDROGEN GAS. THIS GAS, IF IGNITED, MAY CAUSE BATTERY EXPLOSION WITH CASING FRAGMENTS & CORROSIVE LIQUID ELECTROLYTE. CAREFULLY FOLL
OW MANUFAC TURER'S INSTRUCTIONS FOR INSTALLATION & SERVICE.

========== Accidental Release Measures ==========

Spill Release Procedures:STOP FLOW OF MATERIAL, CONTAIN/ABSORB WITH DRY SAND, EARTH, VERMICULITE. IF POSSIBLE, CAREFULLY NEUTRALIZE SPILLED ELECTROLYTE WITH SODA ASH, SODIUM BICARBONATE, LIME, ETC. WEAR ACID-RESISTANT CLOTHES , BOOTS, GLOVES AND FACE SHIELD.DO NOT ALLOW DISCHARGE OF UN-NEUTRALIZED ACID TO SEWER. NEUTRALIZED ACID MUST BE MANAGED
IN ACCORDANCE WITH APPROVED LOCAL, STATE AND FEDERAL REQUIREMENTS.
Neutralizing Agent:SODA ASH, LIME, SODIUM BICARBONATE.

========== Handling and Storage ==========

Handling and Storage Precautions:STORE BATTERIES UNDER ROOF IN A COOL, DRY, WELL-VENTILATED AREAS SEPARATED FROM INCOMPATIBLE MATERIALS AND FROM SOURCES OF IGNITION. STORE ON SMOOTH, IMPERVIOUS SURFACES WHICH ARE PROVIDED WITH LIQUID CONTAINMENT. KEEP AWAY FROM METALLIC OBJECTS WHICH C
OULD BRIDGE THE TERMINALS.
Other Precautions:HANDLE CAREFULLY & AVOID TIPPING. PROHIBIT SMOKING AND AVOID CREATING FLAMES & SPARKS NEARBY TO CHARGING OPERATIONS. CHARGING SPACE SHOULD BE VENTILATED. KEEP BATTERY VENT CAPS IN PLACE. WEAR FACE & E YE PROTECTION WHEN NEAR BATTERIES BEING CHARGED.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:NONE REQUIRED UNDER NORMAL CONDITIONS. WHEN CONCENTRATIONS OF SULURIC ACID MIST ARE KNOWN TO

EXCEED PEL, USE
NIOSH OR MSHA APPROVED RESPIRATORY PROTECTION.
Ventilation:STORE AND HANDLE IN WELL-VENTILATED AREA. IF MECHANICAL VENTILATION 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 AND BOOTS.
Work Hygienic Practices:HANDLE BATTERIES CAUTIOUSLY, DO NOT TIP TO AVOID SPILLS. AVOID BODILY CONTACT WITH INTERNAL COMPONENTS. WEAR PROTECTIVE CLOTHING, EYE & FACE PROTECTION, WHEN FILLING OR HANDLING BATTERIES.
Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

========== Physical/Chemical Properties ==========

HCC:C1
Boiling Pt:=95.C, 203.F
B.P. Text:203FTO 240F(S.G. RANGE
Vapor Pres:17 TO 11(FOR S.G. RANGE)
Vapor Density:>1 (AIR=1)
Spec Gravity:1.230 TO 1.350 (H 20=1)
Viscosity:NOT SPECIFIED BY MFR.
Evaporation Rate & Reference: