EXIDE CORP -- LEAD-ACID BATTERY (ELECTRIC STORAGE BATTERY) -- 6140-01-390-1968

========== Product Identification ==========

Product ID:LEAD-ACID BATTERY (ELECTRIC STORAGE BATTERY)
MSDS Date:06/01/1999
FSC:6140
NIIN:01-390-1968
Status Code:A
MSDS Number: CKGKR
=== Responsible Party ===
Company Name:EXIDE CORP
Address:645 PENN STREET
Box:14205
City:READING
State:PA
ZIP:19612-4205
Country:US
Info Phone Num:61
0-378-0500/0798
Emergency Phone Num:800-424-9300
Preparer's Name:REGULATROY AFFAIRS DEPT
Chemtrec Ind/Phone:(800)424-9300
CAGE:20038
=== Contractor Identification ===
Company Name:EXIDE CORP
Address:645 PENN STREET
Box:14205
City:READING
State:PA
ZIP:19612-4205
Country:US
Phone:610-378-0500/0798
Contract Num:SP0430-00-D-0134
CAGE:20038

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

Ingred Name:LEAD
CAS:7439-92-1
RTECS #:OF7525000
= Wt:53.
OSHA PEL:0.05 MG/M3
ACGIH TLV:0.1

5 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:.01 MG/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 Na
me:SULFURIC ACID
CAS:7664-93-9
RTECS #:WS5600000
Minumum % Wt:30.
Maxumum % Wt:40.
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3
ACGIH STEL:3 MG/M3
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:POLYPROPYLENE
CAS:9003-07-0
RTECS #:UD1842000
Minumum % Wt:5.
Maxumum % Wt:6.

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES
Health Hazards Acute and Chronic:ELECTROLYTE

: HARMFUL BY ALL ROUTES OF
ENTRY, CAUSES SEVERE IRRITATION AND BURNS, CORNEAL DAMAGE/BLINDNESS. LEAD COMPOUNDS: HAZARDOUS EXPOSURE CAN OCCUR ONLY WHEN PRODUCT IS HEATED ABOVE THE MELTING P OINT, OXIDIZED OR OTHERWISE PROCESSED/ DAMAGED TO CREATE DUST, VAPOR OR FUME. LEAD DUST OR FUMES MAY CAUSE IRRITATION OF UPPER RESPIRATORY TRACT, LUNGS, SKIN AND EYES. CHRONIC:ELECTROLYTE: EROSION OF TOOTH ENAMLE, INFLAMMATION OF NOSE, THROAT & BRONCHIAL TUBES. LEAD COMP'D: A
NEMIA, NEUROPATHY, WRIST DROP, KIDNEY DAMAGE, REPRODUCTIVE CHANGES.
Explanation of Carcinogenicity:IARC HAS CLASSIFIED " STRONG INORGANIC ACID MIST OF SULFURIC ACID" AS A CATEGORY I CARCINOGEN, A SUBSTANCE THAT IS CARCINOGENIC TO HUMANS. THIS CLASSIFICATION DOES NOT APPLY TO SULFURIC ACID SOLUTIONS IN STATIC LIQUID STATE OR TO ELECTROLYTE IN BATTERIES LEAD COMP'D LISTED AS 2B IN ANIMALS, PROOF IN HUMANS IS LACKING. ARSENIC IS CONSIDERED CARCINOGEN.
Effects of Overexposure
:ACUTE: ELECTROLYTE (WATER & SULFURIC ACID SOLUTION): SEVERE SKIN IRRITATION, DAMAGE TO CORNEA MAY CAUSE BLINDNESS, UPPER RESPIRATORY IRRITATION. LEAD COMPOUNDS: SYMPTOMS OF TOXICITY INCLUDE HEADACHE, FATIGUE, ABDOMINAL PAIN, LOSS OF APPETITE, MUSCULAR ACHES & WEAKNESS, SLEEP DISTURBANCES & IRRITABILITY. CHRONIC: ELECTROLYTE (WATER & SULFURIC ACID SOLUTION): POSSIBLE EROSION OF TOOTH ENAMEL; INFLA MMATION OF NOSE, THROAT & BRONCHIAL TUBES. LEAD COMPOUNDS: ANEMIS; NE
UROPATHY,
PARTICULARLY OF THE MOTOR NERVES, WITH WRIST DROP; KIDNEY DAMAGE; REPRODUCTIVE CHANGES IN BOTH MALES & FEMALES.
Medical Cond Aggravated by Exposure:SULFURIC ACID MIST MAY AGGRAVATE PULMONARY CONDITIONS, ELECTROLYTE SOLUTON MAY AGGRAVATE SKIN DISEASES SUCH AS ECZEMA AND DERMATITIS. LEAD CAN AGGRAVATE KIDNEY, LIVER & NEUROLOGIC DISEASES.

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

First Aid:INHALATION: REMOVE TO FRESH AIR IMMEDIATELY. IF BR
EATHING IS
DIFFICULT, GIVE OXYGEN; CONSULT PHYSICIAN. INGESTION:GIVE LARGE QUANTITIES OF WATER; DO NOT INDUCE VOMITING; CONSULT PHYSICIAN. SKIN: FLUSH WITH WATER FOR AT LEAST 15 MINUTES; REMOVE CONTAMINATED CLOTHING INCLUDING SHOES. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES WITH EYELIDS OPEN. GET MEDICAL HELP.

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

Lower Limits:4.1%
Upper Limits:74.2%
Extinguishing Media:CO2; FOAM; DRY CHEMICAL.
Fire F

ighting Procedures:USE POSITIVE PRESSURE, SCBA. BEWARE OF ACID SPLATTER DURING WATER APPLICATION & WEAR ACID-RESISTANT CLOTHING, GLOVES, FACE & EYE PROTECTION. IF BATTERIES ARE ON CHARGE, SHUT OFF POWER TO THE CHARGING EQUIPMENT, BUT, NOTE THAT STRINGS OF SERIES CONNECTED BATTERIES MAY STILL POSE RISK OF ELECTRIC SHOCK WHEN CHARGING

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 EXPL OSION WITH DISPERSION OF CASING FRAGMENTS & CORROSIVE LIQUID ELECTROLYTE. CAREFULLY FOLLOW MANUFACTURER'S INSTRUCTIONS.

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

Spill Release Procedures:STOP FLOW OF MATERIAL, CONTAIN/ABSORB SMALL SPILLS WITH DRY SAND/ EARTH/ VERMICULITE. DO NOT USE COMBUSTIBLE MATERIALS. IF POSSIBLE, CAREFULLY NEUTRALIZE SPILLED ELECTROL
YTE.

WEAR ACID-RESISTANT CLOTH ING, BOOTS, GLOVES & FACE SHIELD. DO NOT ALLOW DISCHARGE OF UNNEUTRALIZED ACID TO SEWER. NEUTRALIZED ACID MUST BE MANAGED I/A/W APPROVED LOCAL, STATE REGULATIONS.

Neutralizing Agent:SODA ASH, SODIUM BICARBONATE, LIME.

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

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, IMPERIVIOUS S URFACES WHICH ARE PROVIDED WITH MEASURES FOR LIQUID CONTAINMENT IN THE EVENT OF ELECTROLYTE SPILLS.

Other Precautions:THERE IS A POSSIBLE 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 D ETACHMENT OF ANY CIRCUIT CONNECTIONS. BATTERIES BEING CHARGED WILL GENERATE & RE
LEASE FLAMMABLE HYDR OGEN
GAS.

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

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.

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 AND BOOTS.
Work Hygienic Practices:HANDLE BATTERIES CAUTIOUSLY, DO NOT TIP, AVOID SPILLS. MAKE CERTAIN VENT CAPS ARE ON SECURELY. AVOID BODILY CONTACT WITH INTERNAL COMPONENTS.
Supplemental Safety and Health
IN AREAS WHERE WATER & SULFURIC ACID SOLUTIONS ARE HANDLED IN CONCENTRATIONS GREA
TER THAN 1%, EMERGENCY EYEWASH STATIONS &
SHOWERS SHOULD BE PROVIDED, WITH UNLIMITED WATER SUPPLY. DO NOT OVERCHARGE OR SHORT CIRCUIT BATTERIES.

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

HCC:C1
Boiling Pt:=95.C, 203.F
B.P. Text:203-240F S.G. RANGE
Vapor Pres:17 TO 11(FOR S.G. RANGE)
Vapor Density:>1(AIR=1)
Spec Gravity:1.230 TO 1.350
Evaporation Rate & Reference:< 1(BUTYL ACETATE=1)
Solubility in Water:100%
Appearance and Odor:BATTERY IS A MANUFACTURED A
RTICLE; NO APPARENT
ODOR.

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
CONTACT WITH COMBUSTIBLES & ORGANIC MATERIALS MAY CAUSE FIRE & EXPLOSION. ALSO REACTS VIOLENTLY WITH STRONG REDUCING AGENTS, METALS, SULFUR TRIOXIDE GAS, STRONG OXIDIZERS AND WATER. CONTACT WITH METALS MAY PRODUCE TOXIC SUL
Stability Condition to Avoid:PROLONGED OVERCHARGE AT HIGH CURRENT; SOURCES OF IGNITION.
Hazardous Decomposition Produ
cts:SULFUR TRIOXIDE, CARBON MONOXIDE,
SULFURIC ACID MIST, SULFUR DIOXIDE, HYDROGEN SULFIDE. TEMPERATURES ABOVE THE MELTING POINT ARE LIKELY TO PRODUCE TOXIC METAL FUME, VAPOR OR DUST.

========== Disposal Considerations ==========

Waste Disposal Methods:SPENT BATTERIES; SEND TO SECONDARY LEAD SMELTER FOR RECYCLING. ELECTROLYTE: PLACE NEUTRALIZED SLURRY INTO SEALED ACID RESISTANT CONTAINERS & DISPOSE OF AS HAZARDOUS WASTE, AS APPLICABLE. LARGE WATER-

D ILUTED SPILLS, AFTER NEUTRALIZATION &
TESTING, SHOULD BE MANAGED I/A/W APPROVED LOCAL, STATE & FEDER AL
REQUIREMENTS.

========== MSDS Transport Information ==========

Transport Information:PSN: BATTERY, WET, FILLED WITH ACID, 8, UN2794,
III. LABEL: CORROSIVE.

========== Regulatory Information ==========

SARA Title III Information:RQ AND TPQ FOR 100% SULFURIC ACID = 1,000
LBS. EPCRA SEC 302 NOTIFICATION IS REQUIRED IF 1,000 LBS SPI
LLED.
THIS PRODUCT CONTAINS TOXIC CHEMCALS WHICH MAY BE REPORTABLE UNDER
EPCRA SEC 313 TOXIC CHEMI CAL RELEASE INVENTORY (FORM R)
REQUIREMENTS. RCRA: EPA HAZ WASTE CODE FOR ACID IS D002
(CORROSIVITY).
Federal Regulatory Information:THE INGREDIENTS OF THIS PRODUCT ARE ON
THE TSCA INVENTORY.
State Regulatory Information:CALIFORNIA PROP 65: THIS PRODUCT CONTAINS
LEAD, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER
OF BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM
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========== Other Information ==========

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particular situation.