EXIDE CORP -- LEAD-ACID BATTERY -- 6140-01-116-7768

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

Product ID:LEAD-ACID BATTERY
MSDS Date:06/01/2000
FSC:6140
NIIN:01-116-7768
Status Code:A
MSDS Number: CLJYY
=== 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:INT'L (703) 527-388
7-COLLECT
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
CAGE:20038

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

Ingred Name:LEAD
CAS:7439-92-1
RTECS #:OF7525000
Minumum % Wt:54.
Maxumum % Wt:62.
OSHA PEL:.05 MG/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:.4
OSHA PEL:0.5 MG/M3
ACGIH TLV:0.5 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:TIN
CAS:7440-31-5
RTECS #:XP7320000
= Wt:.16
OSHA PEL:2 MG/M3
ACGIH TLV:2 MG/M3

Ingred Name:CALCIUM
CAS:7440-70-2
RTECS #:EV8040000
= Wt:.02

Ingred Name:ARSENIC
CAS:7440-38-2
RTECS #:CG0525000
= Wt:.01
OSHA PEL:0.01MG/M3
ACGIH TLV:0.01 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:SULFURIC ACID
CAS:7664-93-9
RTECS #:WS5600000
Minumum % Wt:26.
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:12.

Ingred Name:POLYETHYLENE
CAS:9002-88-4
RTECS #:KX3270000
Minumum % Wt:1.
Maxumum % Wt:2.

========== 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: HARMFU

L BY ALL ROUTES OF
ENTRY. LEAD COMPOUNDS: HAZARDOUS EXPOSURE CAN OCCUR ONLY WHEN PRODUCT IS HEATED ABOVE THE MELTING POINT, OXIDIZED OR OTHERWISE PROCESSED OR DAMAGED TO CREATE DUST , VAPOR/ FUME. INHALATION: ELECTROLYTE: BREATHING OF SULFURIC ACID VAPORS / MISTS MAY CAUSE SEVERE RESPIRATORY IRRITATION. LEAD COMPOUNDS : INHALATION OF LEAD DUST OR FUMES MAY CAUSE IRRITATION OF UPP ER RESPIRATORY TRACT AND LUNGS. INGESTION: ELECTROLYTE : MAY CAUSE SEVERE IRRITATION OF

MOUTH, THROAT, ESOPHAGUS AND STOMACH. CHRONIC: TOOTH EROSION, INFLAMM OF RESPIRATORY TRACT, ANEMIA, NEUROPATHY, KIDNEY DAMAGE, REPRODUCTIVE CHANGES.

Explanation of Carcinogenicity:ELECTROLYTE (WATER AND SULFURIC ACID SOLUTION): THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED "STRONG INORGANIC ACID MIST CONTAINING SULFURIC ACID" AS A CATEGORY I CARCINOGEN, A SUBSTANCE THAT IS CARCINOGENIC TO HUMANS. LEAD LISTED AS 2B, ARSENIC LISTED AS AS CARCIN
OGEN BY
NTP, IARC, OSHA.

Effects of Overexposure:ACUTE- ELECTROLYTE (WATER AND 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 AND WEAKNESS, SLEEP DISTURBANCES AND IRRITABILITY. CHRONIC-ELECTROLYTE (WATER AND SULFURIC ACID SOLUTION): POSSIBLE EROSION OF TOOTH ENAMEL; INFLAMMATION OF NOSE
,
THROAT AND BRONCHIAL TUBES. LEAD COMPOUNDS: ANEMIA; NEUROPATHY, PARTICULARLY OF THE MOTOR NERVES, WITH WRIST DROP; KIDNEY DAMAGE; REPRODUCTIVE CHANGES IN BOTH MALES AND FEMALES.

Medical Cond Aggravated by Exposure:OVEREXPOSURE TO SULFURIC ACID MIST MAY CAUSE LUNG DAMAGE AND AGGRAVATE PULMONARY CONDITIONS. CONTACT OF ELECTROLYTE (WATER AND SULFURIC ACID SOLUTION) WITH SKIN MAY AGGRAVATE SKIN DISEASES SUCH AS

========== First Aid Measures ==========
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First Aid:INHALATION: REMOVE TO FRESH AIR IMMEDIATELY. IF BREATHING 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%
Up

per Limits:74.2%
Extinguishing Media:CO2, FOAM, DRY CHEMICAL.
Fire Fighting 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 EVEN WHEN CHARGIN
Unusual Fire/Explosion Hazard:IN OPERATION, BATTERIES GENERATE & REL
EASE 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 W/ DISPERSION OF CASING FRAGMENTS & CORROSIVE LIQUID ELECTROLYTE. CAREFULLY FOLLOW MANUFACTURER'S INSTRUCTIONS FOR

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

Spill Release Procedures:STOP FLOW OF MATERIAL, CONTAIN/ABSORB SMALL SPILLS W/ DRY SAND, EARTH, VERMICULITE. DO NOT USE COMBUST
IBLE
MATERIALS. IF POSSIBLE, CAREFULLY NEUTRALIZE SPILLED ELECTROLYTE W/ SODA ASH, SODIUM BICARBON ATE, LIME, ETC. WEAR ACID-RESISTANT CLOTHING, BOOTS, GLOVES & FACE SHIELD. DO NOT ALLOW DISCHARGE OF UN-NEUTRALIZED ACID TO SEWER. NEUTRALIZED ACID MUST BE MANAGED I/A/W APPROVED LOCAL, STATE AND

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

Handling and Storage Precautions:STORE BATTERIES UNDER ROOF IN COOL, DRY, WELL-VENTILATED AREAS WHICH ARE SEPAR
ATED FROM INCOMPABILE
MATERIALS & FROM ACITIVITIES WHICH MAY CREATE FLAMES, SPARKS OR HEAT. STORE ON SMOOTH, IMPERVIOUS S URFACES WHICH ARE PROVIDED W/ MEASURES FOR LIQUID CONTAINMENT IN THE EVENT OF ELECTROLYTE SPILLS.
Other Precautions:KEEP AWAY FROM METALLIC OBJECTS WHICH COULD BRIDGE THE TERMINALS ON A BATTERY & CREATE A DANGEROUS SHORT-CIRCUIT. HANDLE CAREFULLY & AVOID TIPPING, WHICH MAY ALLOW ELECTROLYTE LEAKAGE. SINGLE BAATTERI ES POSE NO RISK OF ELECTRIC SHOCK BU
T
THERE MAY BE INCREASING RISK OF ELECTRIC SHOCK FROM STRINGS OF CONNECTED BATTERIES

========== 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 MECHANICAL VENTILATION IS USED, COMPONENTS MUST BE ACID-RESISTANT.
Protective Gloves:RU

BBER 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. EYE WASH, SHOWER.
Work Hygienic Practices:HANDLE BATTERIES CAUTIOUSLY, DO NOT TIP TO AVOID SPILLS. MAKE CERTAIN VENT CAPS ARE ON SECURELY. AVOID BODILY CONTACT W/ INTERNAL COMPONENTS. WEAR PROTECTIVE CLOTHING, EYE & FA
CE PROTECTION, WHEN FILLIN
Supplemental Safety and Health
IN AREAS WHERE WATER AND SULFURIC ACID SOLUTIONS ARE HANDLED IN CONCENTRATIONS GREATER THAN 1%, EMERGENCY EYEWASH STATIONS AND SHOWERS SHOULD BE PROVIDED, WITH UNLIMITED WATER SUPPLY.

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

HCC:C1
Boiling Pt:=95.C, 203.F
B.P. Text:203-240F(S.G. RANGE)
Vapor Pres:17 TO 11 (S.G. RANGE)
Vapor Density:>1
Spec Gravity:1.230 TO 1.350
Evaporation Rate & Reference:LESS T
HAN 1
Solubility in Water:100%
Appearance and Odor:A CLEAR LIQUID W/ A SHARP, PENETRATING, PUNGENT ODOR. A BATTERY IS A MANUFACTUR

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

Stability Indicator/Materials to Avoid:YES
ELECTROLYTE (WATER & SULFURIC ACID SOLUTION): CONTACT W/ COMBUSTIBLES & ORGANIC MATERIALS MAY CAUSE FIRE & EXPLOSION. ALSO REACTS VIOLENTLY W/ STRONG REDUCING AGENTS, METALS, SULFUR TRIOXIDE GAS, STRONG OXIDIZERS & WATER. C
Stability Condit
ion to Avoid:PROLONGED OVERCHARGE AT HIGH CURRENT; SOURCES OF IGNITION.
Hazardous Decomposition Products:ELECTROLYTE (WATER & SULFURIC ACID SOLUTION): SULFUR TRIOXIDE, CARBON MONOXIDE, SULFURIC ACID MIST, SULFUR DIOXIDE, HYDROGEN SULFIDE. LEAD: FUMES, VAPORS, DUST.

========== Toxicological Information ==========

Toxicological Information:ELECTROLYTE (WATER AND SULFURIC ACID SOLUTION): THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED "

STRONG INORGANIC ACID MIST CONTAINING 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.

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

Waste Disposal Methods:SPENT BATTERIES: SEND TO SECONDARY LEAD SMELTER FOR RECYCLING. ELECTROLYTE: PLACE NEUTRALIZED SLURRY INTO SEALED ACID RESISTANT CONTAINERS & DIS
POSE 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. CONSULT STATE ENVIRONMENTAL

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

Transport Information:PSN: U.S. DOT: WET(FILLED WITH ELECTROLYTE) BATTERIES ARE REGULATED BY U.S. DOT AS HAZARDOUS MATERIAL. PROPER SHIPPING NAME: BATTERY, WET, FILLED WITH ACID; HAZARD CLASS: CLASS 8;
UN 2794; PACKING GRO UP: I I I; LABEL: CORROSIVE.

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

SARA Title III Information:RCRA: SPENT LEAD-ACID BATTERIES ARE NOT REGULATED AS HAZARDOUS WASTE WHEN RECYCLED. SPILLED SULFURIC ACID IS A CHARACTERISTIC HAZARDOUS WASTE; EPA HAZARDOUS WASTE NUMBER D002 (CORROSIVITY). CERCLA (SU PERFUND) AND EPCRA: (A) REPORTABLE QUAN TITY (RQ) FOR SPILLED 100% SULFURIC ACID UNDER CERCLA (SUPERFUND) AND EPCRA (EMERGENCY PLAN
NING AND COMMUNITY RIGHT TO
KNOW ACT) IS 1,000 LBS. STATE AND LOCAL R EPORTABLE QUANTITIES FOR SPILLED SULFURIC ACD MAY VARY. (B) SULFURIC ACID IS LIS TED "EXTREMELY HAZARDOUS SUBSTANCES" UNDER EPCRA, WITH A THRESHOLD PLANNING QUALITY (TPQ) OF 1,000 LBS. (CONTD- "OTHER INFORMATION")
Federal Regulatory Information:INGREDIENTS OF THIS PRODUCT ARE LISTED IN TSCA INVENTORY.
State Regulatory Information:CALIFORNIA PROPOSITION 65: "WARNING: THIS PRODUCT CONTAINS LEAD, A CHEMI

CAL KNOWN TO THE STATE OF CALIFORNIA
TO CAUSE CANCER,OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM."

========== Other Information ==========

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