

EXIDE CORP -- LEAD-ACID BATTERY (ELECTRIC STORAGE BATTERY) -- 6140-01-203-4697

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

Product ID:LEAD-ACID BATTERY (ELECTRIC STORAGE BATTERY)

MSDS Date:02/01/1996

FSC:6140

NIIN:01-203-4697

Status Code:A

MSDS Number: CKXVQ

=== 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:ENVIRONMENTAL RESOURCES

Chemtec 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:SP0411-01-M-E445

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

===== Compo

sition/Information on Ingredients =====

Ingred Name:LEAD  
CAS:7439-92-1  
RTECS #:OF7525000  
= Wt:53.  
Other REC Limits:0.10 MG/N3(NIOSH)  
OSHA PEL:0.05 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:.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:0.01 MG/M3  
ACGIH TLV:0.20 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:ELECTROLYTE (SULFURIC ACID/WATER/SOLUTION)  
CAS:7664-93-9  
RTECS #:WS5600000  
Minumum % Wt:30.  
Maxumum % Wt:40.  
Other REC Limits:1 MG/M3 (NIOSH)  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:CASE MATERIAL (POLYPROPYLENE)  
CAS:9003-07-0  
RTECS #:UD1842000  
Minumum % Wt:5.  
Maxumum

% Wt:6.

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===== Hazards Identification =====  
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Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES

Health Hazards Acute and Chronic:ELECTROLYTE (WATER AND SULFURIC ACID SOLUTION): HARMFUL BY ALL ROUTES OF ENTRY. LEAD COMPOUNDS: HAZARDOUS EXPOSURE CAN OCCUR ONLY WHEN PRODUCT IS HEATED ABOVE MELTING POINT, OXIDIZED OR OTHERWISE PROCESSED OR DAMAGED TO CREATE DUST, VAPOR, OR FUME. INHALATION: BREATHING OF SULFURIC ACID

VAPORS OR MIST MAY CAUSE SEVERE RESPIRATORY IRRITATION. INHALATION OF LEAD DUST OR FUMES MAY CAUSE IRRITATION OF UPPER RESPIRATORY TRACT AND LUNGS. INGESTION: ELECTROLYTE MAY CAUSE SEVERE IRRITATION OF MOUTH, THROAT, ESOPHAGUS AND STOMACH. ACUTE INGESTION OF LEAD COMPOUNDS MAY CAUSE ABDOMINAL PAIN, NAUSEA, VOMITING, (CONTD. SEE TOXICOLOGICAL)

Explanation of Carcinogenicity:ELECTROLYTE: IARCS CLASSIFIES "STRONG INORGANIC ACID MIST

CONTAINING SULFURIC ACID" AS A CATEGORY I

CARCINOGEN. THIS DOES NOT APPLY TO ELECTROLYTE IN BATTERIES. LEAD: LISTED AS A 2B CARCINOGEN. PROOF OF CARCINOGENICITY IN HUMANS IS LACKING AT PRESENT. ARSENIC: LISTED BY NTP, IARC, OSHA, AND NIOSH AS A CARCINOGEN ONLY AFTER PROLONGED EXPOSURE AT HIGH LEVELS.

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 Agg  
ravated by Exposure:SULFURIC ACID MIST MAY AGGRAVATE PULMONARY CONDITIONS. ELECTROLYTE MAY AGGRAVATE SKIN DISEASES SUCH AS ECZEMA, CONTACT DERMATITIS. LEAD COMPOUNDS MAY AGGRAVATE KIDNEY, LIVER, NEUROLOGIC DISEASES.

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===== First Aid Measures =====  
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First Aid:INHALATION: ELECTROLYTE ; MOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. LEAD; MOVE FROM EXPOSURE, GARGLE, WASH NOSE AND LIPS; CONSULT PHYSICIAN. INGESTION: ELECTROLYTE: G

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===== First Aid Measures =====  
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QUANTITIES OF WATER; DO NOT INDUCE VOMITING; CONSULT PHYSICIAN.  
LEAD; CONSULT PHYSICIAN IMMEDIATELY. SKIN: ELECTROLYTE: FLUSH WITH  
LARGE AMOUNTS OF WATER FOR 15 MINUTES. REMOVE CONTAMINATED  
CLOTHING, INCLUDING SHOES. LEAD; WASH IMMEDIATELY WITH SOAP AND  
WATER. EYES: ELECTROLYTE AND LEAD: FLUSH WITH LARGE AMOUNTS OF  
WATER FOR AT LEAST 15 MINUTES. CONSULT PHYSICIAN IMMEDIATELY.

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

Lower Limits:4

.1%(H<sub>2</sub>)

Upper Limits:74.2%(H<sub>2</sub>)

Extinguishing Media:CO<sub>2</sub>; 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. SHUT OFF POWER TO CHARGING  
EQUIPMENT, BUT, NOTE THAT STRINGS OF SERIES CONNECTED BATTERIES  
MAY STILL POSE RISK OF ELECTRIC SHOCK EVEN WHEN CHARGING EQUIPMENT  
IS SHUT DOWN.

Unusual Fire/Explosion Hazard:BATTERIES GENERATE FLAMMABLE HYDROGE

N

GAS. ALWAYS ASSUME BATTERIES CONTAIN THIS GAS WHICH, IF IGNITED BY  
BURNING CIGARETTE, OR SPARK, MAY CAUSE EXPLOSION WITH DISPERSION OF  
CASING FRAGMENTS AND CORROSIVE LIQUID. CAREFULLY FOLLOW  
INSTALLATION AND SERVICE INSTRUCTIONS. AVOID SHORT CIRCUITING  
TERMINALS.

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

Spill Release Procedures:STOP LEAK. CONTAIN/ABSORB SMALL SPILL WITH  
NON-COMBUSTIBLE MATERIALS (DRY SAND, EARTH, VERMICULITE).

NEUTRALIZ

E WITH SODA ASH, SODIUM BICARBONATE, LIME, ETC. WEAR

ACID-RESISTANT CLOTHING, BOOTS, GLOVES, FACE SHIELD. DO NOT ALLOW  
DISCHARGE OF UNNEUTRALIZED ACID TO SEWER. NEUTRALIZED ACID MUST BE  
MANAGED IAW LOCAL, STATE, FEDERAL REQUIREMENTS. CONSULT STATE  
ENVIRONMENTAL AGENCY AND/OR FEDERAL EPA.

Neutralizing Agent:SODA ASH, SODIUM BICARBONATE, LIME.

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

Handling and Storage Precautions:STORE UNDER ROOF IN COOL, DRY,

WELL-VENTILATED AREAS SEPARATED FROM INCOMPATIBLE MATERIALS AND ACTIVITIES WHICH MAY CREATE FLAMES, SPARKS, HEAT. STORE ON SMOOTH, IMPERVIOUS SURFACES PROVIDED WITH MEASURES FOR LIQUID CONTAINMENT. AVOID SHORTING OF TERMINALS. HANDLE CAREFULLY.

Other Precautions: THERE IS RISK OF ELECTRIC SHOCK FROM CHARGING EQUIPMENT AND FROM SERIES CONNECTED BATTERIES. SHUT-OFF POWER TO CHARGERS WHENEVER NOT IN USE AND BEFORE DETACHMENT OF CIRCUIT CONNECTIONS. BATTERIES BEING CHARGED WILL

GENERATE AND RELEASE

FLAMMABLE HYDROGEN GAS. VENTILATE CHARGING AREA. PROHIBIT SMOKING IN AREA.

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===== 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: IF MECHANICAL VENTILATION IS USED, COMPONENTS MUST BE ACID-RESISTANT. STORE AND HANDLE IN WELL-VENTILATED AREA.

Protective

Gloves: WEAR RUBBER OR PLASTIC-RESISTANT GLOVES WITH ELBOW-LENGTH GAUNTLET.

Eye Protection: WEAR 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: EMERGENCY FLUSHING: IN AREAS WHERE WATER & SULFURIC ACID SOLUTIONS ARE HANDLED IN CONCENTRATIONS GREATER THAN 1%, EMERGENCY EYEWASH STATIONS & SHOWERS SHOULD BE PROVIDED, WITH

UNLIMITED WATER SUPPLY.

Supplemental Safety and Health

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 AND FACE PROTECTION, WHEN FILLING OR HANDLING BATTERIES.

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

HCC:C1

Boiling Pt: >95.C, 203.F

B.P. Text: 203F-240F B.P. RANGE

Vapor Pres: 17 TO 11MM HG @ 77F, S. G.

Vapor Density: >1 (AIR=1)

Spec

Gravity:1.230 TO 1.350 (H2O=1)

Evaporation Rate & Reference:< 1 (BUTYL ACETATE = 1)

Solubility in Water:100%

Appearance and Odor:A BATTERY IS A MANUFACTURED ARTICLE; NO APPARENT ODOR.

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

Stability Indicator/Materials to Avoid:YES

ELECTROLYTE: CONTACT WITH COMBUSTIBLES, ORGANIC MATERIALS, METALS MAY CAUSE FIRE AND EXPLOSION. REACTS VIOLENTLY WITH STRONG REDUCING AGENTS, METALS, SULFUR TRIOXIDE GAS, STRONG OXIDIZER

S,  
WATER.CONTACT WITH METALS MAY PROD

Stability Condition to Avoid:PROLONGED OVERCHARGE AT HIGH CURRENT;  
SOURCES OF IGNITION.

Hazardous Decomposition Products:ELECTROLYTE: SULFUR TRIOXIDE, CARBON MONOXIDE, SULFURIC ACID MIST, SULFUR DIOXIDE, HYDROGEN.

LEAD:TEMPERATURES ABOVE MELTING POINT MAY PRODUCE TOXIC METAL FUME, VAPOR OR DUST, HIGHLY TOXIC ARSINE GAS.

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

Toxicological Information:(CONTD. FROM ACUTE HEALTH

) DIARRHEA, AND

SEVERE CRAMPING. THIS MAY LEAD RAPIDLY TO SYSTEMIC TOXICITY. SKIN CONTACT: ELECTROLYTE; SEVERE IRRITATION, BURNS, AND ULCERATION.

LEAD COMPOUNDS ; NOT ABSORBED THROUGH SKIN. EYE CONTACT: ELECTROLYTE; SEVERE IRRITATION, BURNS, CORNEA DAMAGE, BLINDNESS.

LEAD COMPOUNDS; MAY CAUSE IRRITATION. CHRONIC: ELECTROLYTE; POSSIBLE EROSION OF TOOTH ENAMAL, INFLAMMATION OF NOSE, THROAT, AND BRONCHIAL TUBES. LEAD COMPOUNDS; ANEMIA, NEUROPATHY OF THE MOTOR NERVE

S, WITH WRIST DROP, KIDNEY DAMAGE, REPRODUCTIVE CHANGES IN BOTH MALE AND FEMALES.

===== Ecological Information =====

Ecological:CERCLA AND EPCRA: (RQ) FOR SPILLED 100% SULFURIC ACID IS 1,000 LBS. STATE, LOCAL QANTITIES MAY VARY. SULFURIC ACID IS LISTED "EXTREMELY HAZARDOUS SUBSTANCE" UNDER EPCRA, WITH THRESHOLD PLANNING QUANTI TY (TPQ) OF 1,000 LBS. EPCRA SECTION 302 NOTIFICATION IS REQUIRED IF 1,000 LBS OR MORE SULFURIC ACID IS PRESENT

AT ONE SITE. AVERAGE AUTOMOBILE/COMMERCIAL BATTERY CONTAINS APPROXIMATELY 5 LBS OF SULFURIC ACID. EPCRA SECTION 312 TIER TWO: REPORTING REQUIRED FOR NON-AUTOMOTIVE BATTERIES IF SULFURIC ACID IS PRESENT IN QUANTITIES OF 500 LBS OR MORE AND/OR IF LEAD IS PRESENT IN QUANTITIES OF 10,000 LBS OR MORE. (CONTD. SEE SARA III)

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

Waste Disposal Methods: SPENT BATTERIES: SEND TO SECONDARY LEAD SMELTER. PLACE NEUTRALIZED ELECTROLYTE INTO SEALED ACID RESISTANT CONTAINERS AND DISPOSE OF AS HAZARDOUS WASTE. LARGE WATER-DILUTED SPILLS, AFTER NEUTRALIZATION AND TESTING, SHOULD BE MANAGED I/A/W APPROVED LOCAL, STATE, AND FEDERAL REQUIREMENTS. CONSULT STATE ENVIRONMENTAL AGENCY AND/OR FEDERAL EPA.

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

Transport Information: 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/DIVISION: 8; UN 2794; PACKING GROUP: III; LABEL REQUIRED: CORROSIVE.

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

SARA Title III Information: (CONTD. FROM ECOLOGICAL) SUPPLIER NOTIFICATION: THIS PRODUCT CONTAINS TOXIC CHEMICALS WHICH MAY BE REPORTABLE UNDER EPCRA SEC. 313 TOXIC CHEMICAL RELEASE INVENTORY (FORM R) REQUIREMENTS. FOR MFG FACILITY UNDER SIC CODES 20 THROUGH 39, FOLLOWING INFORMATION IS PROVIDED TO ENABLE YOU TO COMPLETE REQUIRED REPORTS: LEAD: 7439-92-1, WT 53%; SULFURIC ACID/WATER SOLUTION: 7664-93-9, WT 30-40%; ANTIMONY: 7440-36-0, WT 0.2%; ARSENIC: 7440-38-2, WT 0.003%. IF DISTRIBUTED TO OTHER MANUFACTURERS IN SIC CODES 20 THROUGH 39, THIS INFORMATION MUST BE PROVIDED WITH FIRST SHIPMENT OF EACH CALENDAR YEAR. (CONTD. SEE FEDERAL)

Federal Regulatory Information: TSCA: INGREDIENTS IN EXIDE'S BATTERIES ARE LISTED IN THE TSCA REGISTER

Y AS FOLLOWS: ELECTROLYTE: SULFURIC

ACID (H2SO4), 7664-93-9; INORGANIC LEAD COMPOUND: LEAD (PB), 7439-92-1; LEAD OXIDE (PBO), 1317-36-8; LEAD SULFATE (PBSO4), 7446-14-2; ANTIMONY (SB), 7440-36-0; ARSENIC (AS), 7440-38-2; CALCIUM (CA), 7440-70-2; TIN (SN), 7440-31-5. (CONTD. FROM SARA II

I) NOTE: THE SECTION 313 SUPPLIER NOTIFICATION REQUIREMENT DOES NOT APPLY TO BATTERIES WHICH ARE "CONSUMER PRODUCTS".

State Regulatory Information: CALIFORNIA PROPOSITION 65: WARNING: THIS

PRODUCT CONTAINS LEAD, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

ECOLOGICAL DATA: CAA: EXIDE CO RP. SUPPORTS PREVENTATIVE ACTIONS CONCERNING OZONE DEPLETION IN THE ATMOSPHERE DUE TO EMISSIONS OF CFC'S AND OTHER OZONE DEPLETING CHEMICALS (ODC'S) DEFINED BY THE USEPA AS CLASS 1 SUBSTANCES. PERSUAN T TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS (CAAA) OF 1990, FINALIZED ON JANUARY 19, 1993, EXID E ES

TABLISHED A POLICY TO ELIMINATE THE USE OF CLASS 1 ODC'S PRIOR TO THE MAY 15, 1993 DEADLINE.

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

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