Product ID:LEAD-ACID BATTERY MSDS Date:02/01/1993 FSC:6140 NIIN:01-261-4977 MSDS Number: BLLYD === Responsible Party === Company Name: EXIDE CORP Address:645 PENN STREET City:READING State:PA ZIP:19612-4205 Country:US Info Phone Num:215-378-0757/ FAX -0616 Emergency Phone Num:215-378-0757/800-424-9300(CHEMTREC) 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 CAGE:0FGN2 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 CAGE:1U269 **Company Name: ENERSYS INC** Address:8306PATUXENT RANGE RS SUITE 103 Box:City:JESSUP State:MD ZIP:20794-8609 Country:US Phone:301-381-8500 OR 215-378-0757 CAGE:90660 Co

mpany 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: HYSTER CO, PARTS DEPOT Address:1010 E FAIRCHILD ST. Box:334 City:DANVILLE State:IL ZIP:61832-3330 Country:US CAGE:04627 Ingred Name:LEAD (SARA III) CAS:7439-92-1 RTECS #: OF7525000 Fraction by Wt: 53% Other REC Limits:NONE RECOMMENDED OSHA PEL:SEE 1910.1025 ACGIH TLV:0.15 MG/M3 ;DUST 9394 EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB Ingred Name: ANTIMONY (SARA III) CAS:7440-36-0 RTECS #:CC4025000 Fraction by Wt: 0.2%

Other REC Limits:NONE RECOMMENDED OSHA PEL:0.5 MG/M3 ACGIH TLV:0.5 MG (SB)/M3; 9394 EPA Rpt Qty:5000 LBS DOT Rpt Qty:5000 LBS

Ingred Name:ARSENIC (ORGANIC COMPOUNDS) (SARA III) 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; 9394 EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB

Ingred Name:

CALCIUM, METAL CAS:7440-70-2 RTECS #:EV8040000 Fraction by Wt: 0.02% Other REC Limits:NONE RECOMMENDED

Ingred Name:TIN CAS:7440-31-5 RTECS #:XP7320000 Fraction by Wt: 0.06% Other REC Limits:NONE RECOMMENDED OSHA PEL:2 MG/M3 ACGIH TLV:2 MG/M3; 9394

Ingred Name:SULFURIC ACID (SARA III) CAS:7664-93-9 RTECS #:WS5600000 Fraction by Wt: 30-40% Other REC Limits:NONE RECOMMENDED OSHA PEL:1 MG/M3 ACGIH TLV:1 MG/M3; 9394 EPA Rpt Qty:1000 LBS DOT Rpt Qty:1000 LBS

Ingred Name:POLYPROPYLENE CAS:9003-07-0

RTECS #:TR5000000 Fraction by Wt: 5-6% Other REC Limits:NONE RECOMMENDED

LD50 LC50 Mixture:NOT SPECIFIED BY MANUFACTURER. Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO Health Hazards Acute and Chronic:ACUTE:SULFURIC ACID MAY CAUSE SEVERE IRRITATION/BURNS OF EYES, NOSE, MOUTH, THROAT AND STOMACH., MAY DAMAGE EYES, UPPER RESPIRATORY SYSTEM, CHRONIC:TEE

TH EROSION,

INFLAMMATION OF THE NOSE, THROAT AND BRONCHIAL TUBES, CNS, BLOOD, KIDNEYS, GUMS.

Explanation of Carcinogenicity:ARSENIC IS LISTED AS CARCINOGEN BY NTP & IARC. LEAD AND INORGANIC LEAD COMPOUNDS ARE LISTED BY NTP,IARC AS POSSIBLE CAR

Effects of Overexposure:SEVERE SKIN IRRITATION, DAMAGE TO CORNEA, UPPER RESPIRATORY IRRITATION, HEADACHE, FATIGUE, ABDOMINAL PAIN, LOSS OF APPETITE, MUSCULAR ACHES AND WEAKNESS, POSSIBLE EROSION OF TOOTH ENAMEL., INFLAMMATIO N

OF NOSE, THROAT AND BRONCHIAL TUBES., ANEMA, NEUROPATHY, PARTICULARLY OF THE MOTOR NERVES, WITH WRIST DROP, KIDNEY DAMAG
Medical Cond Aggravated by Exposure:PULMONARY CONDITIONS, SKIN DISEASES SUCH AS ECZEMA AND DERMATITIS, KIDNEY, LIVER AND NEUROLOGIC DISEASES.
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First Aid:SEEK MEDICAL CARE IN ALL CASES. EYES/SKIN: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. INHALATION: REMOVE TO FRESH AIR. GIVE CPR/OXYGEN
IF NEEDED. INGESTION: DO NOT INDUCE VOMITING. IF CONSCIOUS, DRINK PROMPTLY A LARGE QUANTITY OF MILK, EGG WHITES, GELATIN SOLUTION OR WATER.
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Lower Limits:4.1 (H2) Upper Limits:74.2 (H2) Extinguishing Media:CARBON DIOXIDE, DRY CHEMICAL, HALOGEN Fire Fighting Procedures:IF BATTERIES ARE ON CHARGE, SHUT OFF POWER. USE POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS. WATER APPLIED TO ELECTROLYTE-> HEAT & CAU SES SPATTERING Unusual Fire/Explosion Hazard:HIGHLY FLAMMABLE HYDROGEN GAS IS GENERATED DURING CHARGING OF BATTERIES. KEEP SPARKS OR OTHER SOURCES OF IGNITION AWAY FROM BATTERIES. BATTERIES MAY EXPLODE. ====================================
 Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT. LIME OR SODA ASH MAY BE USED TO NEUTRALIZE AFTER DILUTING WITH WATER. CONTAIN LARGER SPILLS WITH SAWDUST OR OTHER ABSORBENT MATERIAL. DO NOT ALLOW DISCHARG E OF UNNEUTRALIZED ACID TO SEWER. Neutralizing Agent:SODIUM BICARBONATE SOLUTION (1 LB TO 1 GALLON OF WATER) -LIME OR SODA ASH
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Handling and Storage Precautions:STORE IN COOL, DRY, WELL-VENTILATED AREAS WITH IMPERVIOUS SURFACES AND ADEQUATE CONTAINMENT IN THE EVENT OF SPILLS. STORE UNDER ROOF.

Other Precautions: KEEP TERMINALS COVERED IN PLASTIC CASE. DO NOT SHORT TERMINALS WITH TOOLS, ETC. DO NOT CRACK OR OVERCH ARGE BATTERIES. KEEP LIGHTED CIGARETTES, SPARKS AND FLAMES AWAY FROM CHARGING BATTERIES. DO NOT TO UCH ACID ELECTROLYTE.

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

Respiratory Protection:NOT REQUIRED UNDER NORMAL USE. USE NIOSH-APPROVED ACID-MIST FILTER RESPIRATOR IF 1 MG/M3 TWA IS EXCEEDED (ACID). Ventilation:ADEQUATE GENERAL VENTILATION. IF MECHANICAL VENTILATION IS

USED, COMPONENTS MUST BE ACID RESISTANT.

Protective Gloves: RUBBER OR PLASTIC.

Eye

Protection: SPLASH-PROOF CHEMICAL GOGGLES

Other Protective Equipment: RUBBER APRON AND BOOTS, EYEWASH STATION AND SAFETY SHOWER. USE ACID-PROOF CLOTHING FOR MAJOR SPILLS.

Work Hygienic Practices: REMOVE METALLIC JEWELRY-SHOCK POTENTIAL. WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

NONE SPECIFIED BY MANUFACTURER.

HCC:C1 Boiling Pt:=95.C, 203.F B.P. Text:203-240F Vapor Pres:10 Vapor Density:> 1 Spec Gravi ty:1.230-1.350 pH:ACID Evaporation Rate & amp; Reference:< 1 (N-BUTYL ACETATE=1) Solubility in Water:COMPLETE -ELECTROLYE Appearance and Odor:ARTICLE: NO APPARENT ODOR, ELECTROLYTE: CLEAR LIQUID WITH A SHARP, PUNGENT ODOR

Stability Indicator/Materials to Avoid:YES COMBUSTIBLE AND ORGANIC MATERIALS, STRONG REDUCING AGENTS, METALS, BASES,HALIDES,POTASSIUM NITRATE,PERMANGNATE,PEROXDES. Stability Condition to Avoid:OPEN FLA

MES, SOURCES OF IGNITION, PROLONGED OVERCHARGE. Hazardous Decomposition Products:SULFURIC ACID MIST, OXSIDES OF SULFUR, CARBON MONOXIDE, HYDROGEN.

Waste Disposal Methods:PLACE NEUTRALIZED SLURRY INTO SEALED CONTAINERS AND DISPOSE OF AS HAZARDOUS WASTE AS APPLICABLE. DISPOSE OF IN ACCORDNACE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS FOR ACID OR LEAD SCRAP. RETURN SPENT BATTERY TO SECONDARY

LEADSMELTER.

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ticular situation.