YUASA-EXIDE CORP -- LEAD-ACID BATTERY -- 6140-01-324-1958

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

Product ID:LEAD-ACID BATTERY
MSDS Date:09/01/1993
FSC:6140
NIIN:01-324-1958
MSDS Number: BTRRV
=== Responsible Party ===
Company Name:YUASA-EXIDE CORP
Address:645 PENN STREET
City:READING
State:PA
ZIP:19612-4205
Country:US
Info Phone Num:215-378-0798
Emergency Phone Num:215-378-0500/800-424-9300(CHEMTREC)
CAGE:KO888
=== 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
Company Name:YUASA-EXIDE CORP
Address:645 PENN STREET
Box:City:READING (FORMALLY IN HORSHAM)
State:PA
ZIP:19612-4205
Country:US
Phone:610-378-0550/ FAX -0616
CAGE:KO888

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

Ingred Name:LEAD (SARA III)
CAS:7439-92-1
RTECS #:OF7525000
Fraction by

Wt: 60%
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: 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 (SARA III)
CAS:7440-38-2
RTECS #:CG0525000
Fraction by Wt: 0.2%
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
CAS:7440-70-2
RTECS #:EV8040000
Fraction by Wt: 0.2%
Other REC Limits:NONE RECOMMENDED

Ingred Name:TIN
CAS:7440-31-5
RTECS #:XP7320000
Fraction by Wt: 0.2%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:2 MG/M3
ACGIH TLV:2 MG/M3; 9394

Ingred Name:SULFURIC ACID (SARA III) (ELECTROLYTE)
CAS:7664-93-9
RTECS #:WS5600000
Fraction by Wt: 10-30%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9394
EPA Rpt Qty:10

00 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:PROPENE POLYMERS (POLYPROPPYLENE)
CAS:9003-07-4
RTECS #:UD1842000
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:POLYSTYRENE
CAS:9003-53-6
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:STYRENE ACRYLONITRILE
CAS:9003-54-7
RTECS #:AT6978000
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:ACRYLONITRILE BUTADIENE STYRENE
CAS:9003-56-9
RTECS #:AT6970000
Fraction by Wt: SEE #16%
Other RE
C Limits:NONE RECOMMENDED

Ingred Name:STYRENE BUTADIENE
CAS:9003-55-8
RTECS #:WL6478000
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:POLYVINYL CHLORIDE
CAS:9002-86-2
RTECS #:KV0350000
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:POLYCARBONATE
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:HARD RUBBER
Fraction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:POLYETHYLENE
CAS:9002-88-4
RTECS #:TQ3325000
F

raction by Wt: SEE #16%
Other REC Limits:NONE RECOMMENDED

Ingred Name:CASE MATERIAL, TOTAL OF INGREDIENTS #7 THRU 15.
Fraction by Wt: 5-10%
Other REC Limits:NONE RECOMMENDED

Ingred Name:SILICON DIOXIDE (GEL BATTERIES ONLY) (SEE INGRED #19)
CAS:60676-86-0
RTECS #:VV7328000
Fraction by Wt: 10%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:10 MG/M3 RDUST; Z-3
ACGIH TLV:0.1 MG/M3 RDUST;9394

Ingred Name:SHEET MOLDING COMPOUND (GLASS-REINFORCED POLYESTER) (SEE INGRED #19)
Fraction by Wt: 10%
Other
REC Limits:NONE RECOMMENDED

Ingred Name:OTHER(INORG PB & ELECTROLYTE PRIM CMPNTS OF EVERY BATTERY MFG BY YUASA-EXIDE.OTHER INGRED MAY BE PRESENT DEPENDS ON TYP)
RTECS #:9999999ZZ
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:NOT KNOWN
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES
Health Hazards Acute and Chronic:H2SO4:INHAL:SEVER RESP IRRIT.I
NGEST:IRRT MOUTH/THROAT/ESOPHAGUS/STOMACH.SKIN/EYE:SEVE IRRIT,BURNS,ULCERATION,BURNS,CORNEA DAMAGE,BLINDNESS.PB CMPDS:INHAL:IRRT UPPER RESP TRACT & LUNGS.INGEST:SYS TOXIC ITY.EYE:IRRIT.CHRONIC:TOOTH ENAMEL,INFLAMM OF NOSE/THROAT/BRONCHIAL TUBES.ANEMIA,NEUROPATHY(MOTOR NERVES)KID/REPROD DAMA
Explanation of Carcinogenicity:PER MSDS:H2SO4 MIST FROM MISUSE OF PRODUCT. LEAD CMPDS. ARSENIC.
Effects of Overexposure:SKIN IRRIT, DAMAGE TO CORNEA, UPPER RESP IRRIT. SYMPTOMS OF TOXI

CITY OF LEAD CMPDS WHEN PRODUCT HEATED, OXIDIZED OR OTHERWISE PROCESSED OR DAMAGED TO CREATE DUST/VAPOR/FUME:HEADACHE, FATIGUE, ABDOMINA L PAIN, LOSS OF APPETITE, MUSCULAR ACHES& WEAKNESS, SLEEP DISTURBANCES & IRRITABILITY.
Medical Cond Aggravated by Exposure:OVEREXPOSURE TO H2SO4 MIST MAY CAUSE LUNG DAM,AGGRAVATE PULM CONDITIONS.H2SO4 CONTACT W/SKIN MAY AGGRAVATE SKIN DISEASES(ECZEMA & CONTACT DERM).PB & CMPDS CAN AGGRAVATE SOME FORMS OF KID/LIV/NEURO DIS

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

First Aid:INHAL:ACID:REMOVE TO FRESH AIR IMMED. IF BREATH DIFFI GIVE OXY.PB:GARGLE,WASH NOSE/LIPS.CALL DR.INGEST:ACID:GIVE LG QUANTITIES OF H2O.DON'T INDUCE VOMIT.CALL DR.SKIN:ACID:FLUSH W/LOTS AMTS OF H2O FOR @ LEAST 15MINS.REMOVE CONTAMIN CLOTH/SHOE.PB:WASH IMMED W/SOAP & WATER.EYE:ACID/PB:FLUSH IMMED W/LG AMTS OF H2O FOR @ LEAST 15MINS.SEE DR.

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

Low
er Limits:4.1 H2 GAS
Upper Limits:74.2
Extinguishing Media:CARBON DIOXIDE, FOAM, DRY CHEMICAL.
Fire Fighting Procedures:IF BATTERIES ARE ON CHARGE, SHUT OFF POWER. USE + PRES SCBA. WATER APPLIED TO ELECTROLYTE GENERATES HEAT & CASUES IT TO SPATTER. WEAR ACID-RESISTANT CLOTHING.
Unusual Fire/Explosion Hazard:HIGHLY FLAMM H2 GAS GENERATED DURING CHARG/OPER OF BATTERY.KEEP SPARKS OR OTHER SOURCES OF IGN AWAY.DON'T ALLOW METALLIC MATLS TO CONTACT -/+ TERMINALS.

========== A
ccidental Release Measures ==========

Spill Release Procedures:STOP FLOW.CONTAIN/ABSORB SM SPILLS W/DRY SAND,EARTH,VERMI.DON'T USE COMBUST MATLS.CAREFULLY NEUTRALIZE ELECTROLYTE W/SODA ASH,SODIUM BICARBONATE,LIME,ETC.WEAR ACID-RESISTANT CLOTH,BOOT,GLOV,FACESHIELD .DON'T ALLOW DISCHARGE OF UNTREATED ACIDTO SEWER.
Neutralizing Agent:SODA ASH, SODIUM BICARBONATE, LIME.

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

Handling and Storage Precautions:ST

ORE BATTERIES IN COOL,DRY,WELL-VENTI
AREAS W/IMPERVIOU SURFACES & ADEQUATE CONTAINMENT IN EVENT OF SPILLS.SEPARATE FROM INCOMP MATLS,SPARKS,HEAT,FIR
Other Precautions:BATTERIES SHOULD ALSO BE STORED UNDER ROOF FOR PROTECTION AGAINST ADVERSE WEATHER CONDITIONS.STORE & HANDLE ONLY IN AREAS W/ADEQUATE H2O SUPPLY & SPILL CONTROL.AVOID DAMAGE TO CONTAINERS.FOLLOW MFG'S INSTRUCTIONS FOR INSTALLATION & SERVICE.

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

R
espiratory Protection:NONE REQUIRED UNDER NORMAL CONDITONS. WHEN CONCENTRATION OF H2SO4 MIST ARE KNOWN TO EXCEED PEL USE NIOSH OR MSHA APPROVED RESPIRATORY PROTECTION.
Ventilation:STORE & HANDLE IN WELL-VENTILATED AREA. IF MECHANICAL VENTILATION IS USED COMPONENTS MUST BE ACID-RESISTANT.
Protective Gloves:RUB,PLASTIC ACID RESISTANT W/ELBOW LENGT
Eye Protection:CHEMNICAL GOGGLES OR FACE SHIELD.
Other Protective Equipment:ACID-RESIS APRON.UNDER SEVERE EXPOSURE OR EMERG CONDITIONS W
EAR ACID-RESIS CLOTH/BOOTS.EYEWASH & SHOWERS W/UNLIM H2O SUP
Work Hygienic Practices:HANDLE CAUTIOUSLY TO AVID SPILLS.MAKE CERTAIN VENT CAPS ON SECURLEY.AVOID CONTACT W/INTERNAL COMPONENTS.
Supplemental Safety and Health
CONSULT STATE ENVIRONEMNTAL AGENCY &/OR FED EPA FOR DISPOSAL. WEAR PROTECTIVE CLOTHING WHEN FILLING OR HANDLING BATTERIES.

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

HCC:C1
Boiling Pt:B.P. Text:203F,95C
Vapor Pres:10
Vapor Density:>1
Spec
Gravity:1.215-1.350
Evaporation Rate & Reference: