ADVANTAGE BATTERY CORP. SUBSID OF ACUMEX -- LEAD-ACID BATTERY -- 6140-01-360-6489

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

Product ID:LEAD-ACID BATTERY
MSDS Date:03/15/1996
FSC:6140
NIIN:01-360-6489
MSDS Number: BYHBQ
=== Responsible Party ===
Company Name:ADVANTAGE BATTERY CORP. SUBSID OF ACUMEX
Address:8701 BEDFORD-EULESS RD SUITE 501
City:HURST
State:TX
ZIP:76053
Country:US
Info Phone Num:817-589-12
25
Emergency Phone Num:800-424-9300 (CHEMTREC)
CAGE:0VW59
=== Contractor Identification ===
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:GES AMERICA (FORMERLY) ADVANTAGE BATTERY CORP
Address:7001 GRAPEVINE HIGHWAY 500
Box:City:NORTH RICHLAND HILLS
State:TX
ZIP:76180
Country:US
Phone:817-589-1225
CAGE:0VW59

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

In

gred Name:SULFURIC ACID (SARA III)
CAS:7664-93-9
RTECS #:WS5600000
Fraction by Wt: 11-23%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9293
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:LEAD (SARA III)
CAS:7439-92-1
RTECS #:OF7525000
Fraction by Wt: 64-80%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:0.05 MG/M3;1910.1025
ACGIH TLV:0.15 MG/M3;DUST 9293
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:ANTIMONY (SARA 313) (CERCLA)
CAS:7440-36-0
RTECS #:CC4025000
Fracti
on by Wt: 1.5%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:0.5 MG/M3
ACGIH TLV:0.5 MG (SB)/M3; 9495
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:ARSENIC (SARA 313) (CERCLA)
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; 9495
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:CALCIUM, METAL
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; 9495

Ingred Name:POLYPROPYLENE (CASE MATERIAL)
CAS:9003-07-0
RTECS #:TR5000000
Fraction by Wt: 5-6%
Other REC Limits:NONE RECOMMENDED

Ingred Name:POLYETHYLENE (SEPARATOR MATERIAL)
CAS:9002-88-4
RTECS #:TQ3325000
Fraction by Wt: 1-2%
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:LD50 (ORAL RAT) IS 2140 MG/KG
(H2SO4)
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE:ACID IS CORROSIVE TO ALL
TISSUES! MAY CAUSE IRRITATIONAND BURNS OF SKIN, EYES, OR GI TRACT.
MAY CAUSE CORNEAL DAMAGE OR BLINDNESS. MAY BE FATAL IF SWALLOWED.
CHRONIC: TOOTH EROSION, INFLAMMATION OF NOSE, THROAT AND BRONCHIAL
TUBES.
Explanation of Carcinogenicity:THE ELECTROLYTE IS NOT LISTED BY IARC,
NTP, OR OSHA AS A CA
RCINOGEN.
Effects of Overexposure:INHALATION: BURNING SENSATION IN NOSE, THROAT
AND LUNGS, COUGHING, WHEEZING, SHORTNESS OF BREATH. EYES: REDNESS,
TEARING, BLURRED VISION, BURNS, SEVERE PAIN. SKIN: SEVERE PAIN,
BURNS, REDNESS, RASH, I TCHING. INGESTION: BURNS OF MOUTH, THROAT,
AND ESOPHAGUS, SEVERE STOMACH PAIN, NAUSEA, VOMITING.
Medical Cond Aggravated by Exposure:PERSONS WITH A HISTORY OF AILMENTS
OR WITH A PRE-EXISTING DISEASE INVOLVING THE RESPIRATORY TRACT OR
TEETH M

AY BE AT INCREASED RISK FROM EXPOSURE.

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

First Aid:INHALATION:REMOVE TO FRESH AIR. RESUSCITATE IF NOT BREATHING. GET MEDICAL ATTENTION. EYES:IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR 15 MINUTES HOLDING EYELIDS OPEN. GET PROMPT MEDICAL ATTENTION. SKIN :REMOVE CONTAMINATED CLOTHING. WASH WITHPLENTY OF WATER FOR 15 MINUTES. GET MEDICAL ADVICE. INGESTION:DO NOT INDUCE VOMITING. GIVE NOTHING BY MOUTH IF UNCONSCI
OUS. GET IMMEDIATE MEDICAL ATTENTION.

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

Extinguishing Media:USE DRY CHEMICAL, CARBON DIOXIDE, FOAM, HALOGEN.
Fire Fighting Procedures:USE OF WATER IN EXTINGUISHING BURNING BATTERIES MAY CAUSE SPATTERING DUE TO THE PRESENCE OF MOLTEN LEAD. WEAR SCBA AND FULL PROTECTIVE GEAR.
Unusual Fire/Explosion Hazard:WHEN BATTERY IS BEING CHARGED, HYDROGEN GAS IS PRODUCED. BATTERY MAY EXPLODE IF HYDROGEN GAS TRAPPED INSIDE TH
E CASE SHOULD IGNITE.

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

Spill Release Procedures:SHOULD A BATTERY BREAK OPEN, ISOLATE AREA. ELECTROLYTE SHOULD BE ABSORBED WITH A NON-ORGANIC TYPE ABSORBENT SUCH AS DRY SAND OR EARTH. RESIDUE MAY BE NEUTRALIZED WITH BAKING SODA AND RINSED WITH WATER .
Neutralizing Agent:USE SODA ASH OR BAKING SODA TO NEUTRALIZE THE ELECTROLYTE.

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

Handling and Sto
rage Precautions:AVOID THE USE OF UNINSULATED TOOLS. IF THEY ARE REQUIRED, TAKE CARE NOT TO ELECTRICALLY SHORT THE TERMINALS. REMOVE METAL JEWELRY BEFORE SERVICING.
Other Precautions:UNDER NORMAL CONDITIONS OF USE, EXPOSURE TO LEAD OR LEAD CONTAINING COMPOUNDS DOES NOT OCCUR. SHOULD A BATTERY BREAK OPEN AND A LEAD SPILL OCCUR, PRECAUTIONS SHOULD BE TAKEN TO PREVENT LEAD DUST FROM BECOMING AIR BORNE.

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

Respir

atory Protection:UNDER NORMAL CONDITIONS OF USE, RESPIRATORY PROTECTION IS NOT REQUIRED. HOWEVER, IF CONDITIONS ARISE THAT REQUIRE THEIR USE, USE ONLY NIOSH/MSHA RESPIRATORS APPROVED FOR DUST, FUME AND MIST.
Ventilation:BATTERY CHARGING AREAS MUST BE ADEQUATELY VENTILATED TO PREVENT HAZARDOUS CONCENTRATIONS OF FLAMMABLE GAS OR ACID MIST.
Protective Gloves:RUBBER GLOVES APPROVED FOR SULFURIC ACID
Eye Protection:CHEMICAL SPLASH GOGGLES AND FACE SHIELD
Other Protective Equipment:EYE WASH STATION AND SAFETY SHOWER. INDUSTRIAL-TYPE IMPERVIOUS WORK CLOTHING, BOOTS AND APRON AS REQUIRED.
Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.
Supplemental Safety and Health
MSDS FROM MANUFACTURER WAS STRICTLY FOR SULFURIC ACID; PHYSICAL CHARACTERISTICS IN MSDS ARE FOR SULFURIC ACID.

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

HCC:C1
Boiling Pt:B.P. Text:230 F,110C
Vapor Pres:10 MMHG
Vapor Density:>1
Spec Gravity:1.24-1.28
Evaporation Rate & Reference: