

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:817-589-122

5

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 =====

Ing

red 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  
Fraction 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 CAR  
CINOGEN.  
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 MA

Y 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 UNCONSCIOUS. 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  
THE  
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 Storage  
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 =====

Respiratory

tory 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:230F  
,110C

Vapor Pres:10 MMHG

Vapor Density:>1

Spec Gravity:1.24-1.28

Evaporation Rate & Reference: