TROJAN BATTERY CO -- LEAD/ACID BATTERY -- 6140-01-265-2747
========== Product Identification ==========

Product ID:LEAD/ACID BATTERY
MSDS Date:03/03/1997
FSC:6140
NIIN:01-265-2747
Status Code:A
MSDS Number: CKGQF
=== Responsible Party ===
Company Name:TROJAN BATTERY CO
Address:12380 CLARK ST
City:SANTA FE SPRINGS
State:CA
ZIP:90670
Country:US
Info Phone Num:562-946-8581
Emergency Phone Num:800-424-9300
Pre
parer's Name:JOHN J. BRYSON
Chemtrec Ind/Phone:(800)424-9300
CAGE:94598
=== 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
Contract Num:SP0430-00-M-G688
CAGE:1U269
Company Name:TROJAN BATTERY CO
Address:12380 CLARK ST
Box:City:SANTA FE SPRINGS
State:CA
ZIP:90670
Country:US
Phone:562-946 8381 / 800-423-6569
CAGE:94598

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

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Ingred Name:LEAD/LEAD OXIDE/LEAD SULFATE
CAS:7439-92-1
Minumum % Wt:60.
Maxumum % Wt:97.
ACGIH TLV:0.15 MG/M3

Ingred Name:ANTIMONY
CAS:7440-36-0
RTECS #:CC4025000
Minumum % Wt:1.5
Maxumum % Wt:6.
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
< Wt:1.
ACGIH TLV:0.01 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:SULFURIC ACID (BATTERY ELECTROLYTE)
CAS:7664-93-9
RTECS #:WS5600000
Minumum %
Wt:10.
Maxumum % Wt:38.
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3
ACGIH STEL:3 MG/M3
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:CALCIUM
CAS:7440-70-2
RTECS #:EV8040000
< Wt:.15

Ingred Name:TIN
CAS:7440-31-5
RTECS #:XP7320000
< Wt:.31
ACGIH TLV:2 MG/M3

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

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 CAN CAUSE

IRRITATION OF
EYES, NOSE, THROAT. BREATHING MIST PRODUCES RESPIRATORY DIFFICULTY, CONTACT WITH SKIN & EYES CAUSES IRRITATION & SKIN BURNS. CHRONIC-REPEATED CONTACT WITH SULFURI C ACID BATTERY ELECTROLYTE FLUID MAY CAUSE DRYING OF THE SKIN WHICH MAY RESULT IN IRRITATION & DERMATITIS. PROLONGED INHALATION OF A MIST OF SULFURIC ACID CAN CAUSE INFLAMMATION OF THE UPPER RESPIRATO RY TRACT LEADING TO CHRONIC BRONCHITIS. SHORT TERM LIQUID OR VAPOR CONTACT MAY RESULT I
N EYE IRRITATION & ACID BURNS. PROLONGED CONTACT TO STRONG ACID FUMES MAY RESULT IN EROSION OF THE TOOTH ENAMEL.
Effects of Overexposure:ACID CAN CAUSE IRRITATION OF EYES, NOSE, THROAT. BREATHING MISTS PRODUCES RESPIRATORY DIFFICULTY, CONTACT WITH SKIN AND EYES CAUSES IRRITATION AND SKIN BURN. SULFURIC ACID MIST CAUSES COUGHING AND WIL L BURN EYES AND SKIN.

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

First Aid:INHALATION: MOVE TO VENTILATED AREA. OBTAIN
MEDICAL
ATTENTION. EYES: WASH THE EYES WITH COPIOUS QUANTITIES OF RUNNING WATER FOR 15 MIN. OBTAIN MEDICAL ATTENTION. SKIN: FLUSH AREA WITH LARGE AMOUNTS OF RUNNING WATER. REMOVE CONTAMINATED CLOTHING AND OBTAIN MEDICAL ATTENTION. INGESTION: WASH OUT MOUTH WITH RUNNING WATER. GIVE MILD OR WATER TO DRINK. DO NOT INDUCE VOMITING. CALL PHYSICIAN. INGEST ION: WASH OUT MOUTH WITH RUNNING WATER. GIVE MILK OR WATER TO DRINK. FO NOT INDUCE VOMTING. CALL PHYSICIAN. LEAD

EXPOSURE: MAY CAUSE LASSITUDE, CONSTIPATION, ANEMIA, NAUSEA, VOMITING, PARALYSIS AND CN S DEPRESSION.

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

Lower Limits:4.1, H2
Upper Limits:74.2, H2
Extinguishing Media:HALON, DRY CHEMICAL.
Fire Fighting Procedures:LEAD/ACID BATTERIES DO NOT BURN, OR BURN WITH DIFFICULTY. EXTINGUISH FIRE WITH AGENT SUITABLE FOR SURROUNDING COMBUSTIBLE MATERIALS. COOL EXTERIOR OF BATTERY IF EXPOSED TO FIRE TO PREVENT RUPTURE. THE

ACID MIST/VAPORS GENERATED BY HEAT OR FIRE
ARE CORROSIVE. WEAR RESPIRATORY PROTECTION (SCBA) AND PROTECTIVE CLOTHING.
Unusual Fire/Explosion Hazard:HYDROGEN GAS AND SULFURINC ACID VAPORS
ARE GENERATED UPON OVERCHARGE. VENTILATE CHARGING AREAS. HYDROGEN GAS MAY BE FLAMMABLE OR EXPLOSIVE WHEN MIXED WITH AIR, OXYGEN, CHLORINE.

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

Spill Release Procedures:WEAR PROTECTIVE CLOTHING. VENTILATE ENCLOSED
AREAS. D
IKE TO CONTAIN CONTAMINATED MATEIRALS AND LIQUIDS. LIMIT
SITE ACCESS TO EMERGENCY RESPONDERS. NEUTRALIZE WITH SODIUM BICARBONATE, SODA ASH, LIME, O R OTHER NEUTRALIZING AGENT.
Neutralizing Agent:SODIUM BICARBONATE, SODA ASH, LIME, OR OTHER
NEUTRALIZING AGENT.

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

Handling and Storage Precautions:KEEP AWAY FORM FLAMES DURING AND
IMMEDIATELY AFTER CHARGING. CONBUSTION OR OVERCHARGING MAY CREATE OR LIBERATE TOXIC
AND HAZARDOUS GASES AND LIQUIDS INCLUDING
HYDROGEN, SULFURIC ACID MIST, SULFUR DIOX IDE, SULFUR TRIOXIDE, STILBINE, ARSINE AND SULFURIC ACID.
Other Precautions:STORE BATTERIES IN COOL, DRY, WELL-VENTILATED AREA.
DO NOT SHORT CIRCUIT BATTERY TERMINALS, OR REMOVE VENT CAPS DURING STORAGE OR RECHARGING.

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

Respiratory Protection:SULFURIC ACID MIST- FULL FACE OR HLF MASK
RESPIRATOR WITH ACID MIST FILTER OR SCBA.
V
entilation:CHANGE AIR EVERY 15 MIN.
Protective Gloves:ACID RESISTANT RUBBER OR PLASTIC.
Eye Protection:GOGGLES OR FACE SHIELD.
Other Protective Equipment:ACID-RESISTANT RUBBER OR PLASTIC APRON,
BOOTS AND PROTECTIVE CLOTHING.
Supplemental Safety and Health
NONE

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

HCC:C1
Boiling Pt:=112.8C, 235.F
B.P. Text:ELECTROLYTE
Vapor Pres:1 MM HG @ 145.8F
Vapor Density:3.4,H2SO4
Spec Gravity:1.250 - 1.300. ELECTOLYTE
Solubility in Wate

r:100%, ELECTROLYTE
Appearance and Odor:POLYPROPYLENE OR HARD RUBBER CASE, SOLID BATTERY W/ COLORLESS ACID LIQUID

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

Stability Indicator/Materials to Avoid:YES
SPARKS, OPEN FLAMES, KEEP BATTERY CAUSE AWAY FROM STRONG OXIDIZERS.
Stability Condition to Avoid:AVOID OVERCHARGING AND SMOKING, OR SPARKS NEAR BATTERY SURFACE.
Hazardous Decomposition Products:AN EXPLOSIVE HYDORGEN/OXYGEN MIXTURE WITHIN THE BATTERY MAY OCCUR D
URING CHARGING.

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

Waste Disposal Methods:RETURN WHOLE SCRAP BATTERIES TO DISTRIBUTOR, MANUFACTURER OR LEAD SMELTER FOR RECYCLING. FOR NEUTRALIZED SPILLS, PLACE RESIDUE INTO CONTAINERS WITH SORBENT MATERIAL, SAND OR EARTH FOR DISPOSAL. CONTAC T LOCAL AND/OR STATE ENVIRONMENTAL OFFICIALS REGARDING DISPOSAL INFORMATION.

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

Transport Information:BATT
ERIES, WET, FILLED WTIH ACID, 8, UN2794, PG III.