

TROJAN BATTERY CO -- LEAD/ACID BATTERY -- 6140-01-031-6877

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

Product ID:LEAD/ACID BATTERY

MSDS Date:02/01/2000

FSC:6140

NIIN:01-031-6877

Status Code:A

MSDS Number: CLGTR

=== 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

Preparer's Name:DIANE H. KENNEDY, REHS

Chemtrec Ind/Phone:(800)424-9

300

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:SP0411-01-M-EP96

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 =====

Ingred Name:LEAD/LEAD OXIDE/LEAD SULFATE

CAS

:7439-92-1
RTECS #:OF7525000
Minumum % Wt:60.
Maxumum % Wt:97.
ACGIH TLV:0.15 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

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:1
0.
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:.3
ACGIH TLV:2 MG/M3

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:ACUTE: ELECTROLYTE-ELEC

TROLYTE IS

CORROSIVE & CONTACT MAY CAUSE SKIN IRRITATION & CHEMICAL BURNS. ELECTROLYTE CAUSES SEVERE IRRITATION & BURNS OF EYES, NOSE & THROAT. INGESTION CAN CAUSE SEVERE BURNS & VOMITING. LEAD-DIRECT SKIN OR EYE CONTACT MAY CAUSE LOCAL IRRITATION. INHALATION OR INGESTION OF LEAD DUST OR FUMES MAY RESULT IN HEADACHE, NAUSEA, VOMITING, ABDOMINAL SPASMS, FATIGUE, SLEEP DISTURBANCES, WEIGHT LOSS, ANEMIA, LEG, ARM & JOINT PAIN. (SEE OTHER INFORMATION)

Effects of Overexp

osure:ELECTROLYTE-ELECTROLYTE IS CORROSIVE & CONTACT

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Medical Cond Aggrava

ted by Exposure:IF BATTERY IS BROKEN OR MATERIAL IS

SPILLED, THEN PERSONS WITH THE FOLLOWING MEDICAL CONDITIONS MUST TAKE PRECAUTIONS: PULMONARY EDEMA, BRONCHITIS, EMPHYSEMA, DENTAL EROSION AND TRACHEOBRONCHITIS.

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

First Aid:CONTACT WITH INTERNAL COMPONENTS IF BATTERY IS OPENED, BROKEN OR SPILLED. INHALATION: REMOVE TO FRESH AIR AND PROVIDE MEDICAL OXYGEN/CPR IF NEEDED. OBTAIN MEDICAL ATTENTION. EYES: IMMEDI

ATELY

FLUSH WITH WATER FOR AT LEAST 15 MINUTES, HOLD EYELIDS OPEN. OBTAIN MEDICAL ATTENTION. SKIN: FLUSH CONTACTED AREA WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND OBTAIN MEDICAL ATTENTION IF NECESSARY. INGESTION: DO NOT INDUCE VOMITING. IF CONSCIOUS DRINK LARGE AMOUNTS OF WATER/MILK. OBTAIN MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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

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Autoignition Temp:=357.2C, 675.F

Autoignition Temp Text:POLYPR

Lower Limits:4.1%, H2

Upper Limits:74.2%, H2

Extinguishing Media:CLASS ABC, CO2, HALON. EXTINGUISH FIRE W/ AGENT SUITABLE FOR SURROUNDING COMBUSTIBLE MATERIALS.

Fire Fighting Procedures:LEAD-ACID BATTERIES DO NOT BURN OR BURN WITH DIFFICULTY. DO NOT USE WATER ON FIRES WHERE MOLTEN METAL IS PRESENT. COOL EXTERIOR OF BATTERY IF EXPOSED TO FIRE TO PREVENT RUPTURE. THE ACID MIST & VAPORS GENERATED BY HEAT OR

FIRE ARE

CORROSIVE. USE SCBA & FULL PROTECTIVE EQUIPMENT OPERATED IN THE POSITIVE-PRESSURE MODE.

Unusual Fire/Explosion Hazard:HYDROGEN GAS & SULFURIC ACID VAPORS ARE GENERATED UPON OVERCHARGE & POLYPROPYLENE CASE FAILURE. VENTILATE CHARGING AREAS. HYDROGEN GAS MAY BE FLAMMABLE OR EXPLOSIVE WHEN MIXED WITH AIR, OXYGEN, CHLORINE. KEEP SPARKS OR OTHER SOURCES OF IGNITION AWAY FROM BATTERIES. SULFURIC ACID REACTS VIOLENTLY WITH WATER.

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

Spill Release Procedures:STOP RELEASE, IF POSSIBLE. AVOID CONTACT W/ ANY SPILLED MATERIAL. CONTAIN SPILL, ISOLATE HAZARD AREA & DENY ENTRY. LIMIT SITE ACCESS TO EMERGENCY RESPONDERS. NEUTRALIZE W/ SODIUM BICARBONATE, SODA ASH, LIME OR OTHER NEUTRALIZING AGENT. PLACE BATTERY IN SUITABLE CONTAINER FOR DISPOSAL. DISPOSE OF CONTAMINATED MATERIAL I/A/W APPLICABLE LOCAL, STATE & FEDERAL REGULATIONS.

Neutralizing Agent:NEUTRALIZE WITH SODIUM BICARBONATE, SODA ASH, LIME OR OTHER NEUTRALIZING AGENT.

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

Handling and Storage Precautions:KEEP AWAY FROM FLAMES DURING & IMMEDIATELY AFTER CHARGING. COMBUSTION OR OVERCHARGING MAY CREATE OR LIBERATE TOXIC & HAZARDOUS GASES & LIQUIDS INCLUDING HYDROGEN, SULFURIC ACID MIST, SULFUR DIOXIDE, SULFUR TRIOXIDE, STIBINE, ARSINE & SULFURIC ACID. STORE BATTERIES IN COOL, DRY, WELL VENTILATED AREA.

Other Precautions:

GOOD PERSONAL HYGIENE & WORK PRACTICES ARE MANDATORY. REFRAIN FROM EATING, DRINKING OR SMOKING IN WORK AREA. THOROUGHLY WASH HANDS, FACE, NECK & ARMS BEFORE EATING, DRINKING OR SMOKING. LAUNDRY SOILED CLOTHING BEFORE REUSE. EMPTIED BATTERIES CONTAIN HAZARDOUS SULFURIC ACID RESIDUE.

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

Respiratory Protection:ACID/GAS NIOSH APPROVED RESPIRATOR IS REQUIRED WHEN THE PEL IS EXCEEDED OR EMPLOYEE EXPERIENCES RES

PIRATORY

IRRITATION. WHEN EXPOSURE LEVELS ARE UNKNOWN OR WHEN FIREFIGHTING, WEAR A SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN A POSITIVE PRESSURE MODE.

Ventilation:MUST BE PROVIDED WHEN CHARGING IN AN ENCLOSED AREA. CHANGE AIR EVERY 15 MIN. LOCAL EXHAUST-WHEN PEL IS EXCEEDED. MECHANICAL (GENERAL)-STATIONARY APPL'NS.

Protective Gloves:RUBBER OR PLASTIC ACID RESISTANT GLOVES W/ ELBOW LENGTH GAUNTLET AS NEEDED.

Eye Protection:ANSI APPROVED SAFETY GLASSES WITH SIDE SHIELDS/FACE SHIELD RECOMMENDED.

Other Protective Equipment:SAFETY GOGGLES. ACID-RESISTANT RUBBER OR PLASTIC APRON, BOOTS AND PROTECTIVE CLOTHING. SAFETY SHOWER AND EYEWASH.

Work Hygienic Practices:GOOD PERSONAL HYGIENE AND WORK PRACTICES ARE MANDATORY.

Supplemental Safety and Health

VENTILATION AS DESCRIBED IN THE INDUSTRIAL VENTILATION MANUAL PRODUCED BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, SHALL BE PROVIDED IN AREAS WHERE EXPOSURE ARE ABOVE THE PEL OR TLV SPECIFIED BY OSHA OR OTHER LOCAL, STATE AND FEDERAL REGULATIONS.

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

HCC:C1

Boiling Pt:=112.8C, 235.F

B.P. Text:ELECTROLYTE (APPROX)

Melt/Freeze Pt: