C & D TECHNOLOGIES INC -- LEAD-ANTIMONY BATTERY, 14-330 -- 6140-01-323-1328
========== Product Identification ==========

Product ID:LEAD-ANTIMONY BATTERY, 14-330
MSDS Date:11/06/1997
FSC:6140
NIIN:01-323-1328
Status Code:A
MSDS Number: CJDFV
=== Responsible Party ===
Company Name:C & D TECHNOLOGIES INC
Address:1400 UNION MEETING RD
Box:3053
City:BLUE BELL
State:PA
ZIP:19422-0858
Country:US
Emergency Phone N
um:610-828-9309
Preparer's Name:S.J. KELLY
Chemtrec Ind/Phone:(800)424-9300
CAGE:1CTA5
=== Contractor Identification ===
Company Name:C & D TECHNOLOGIES INC
Address:1400 UNION MEETING RD
Box:3053
City:BLUE BELL
State:PA
ZIP:19422-0858
Country:US
Phone:215-619-2700
CAGE:1CTA5
Company Name:POWER SYSTEMS ENGINEERING
Address:16711 RICHMOND AVE SUITE 2
Box:City:HAZEL CREST
State:IL
ZIP:60429-1069
Country:US
Phone:708-210-2500
Contract Num:SP0430-99-M-F554
CAGE:04NK4

========== Composition/Inform

ation on Ingredients ==========

Ingred Name:LEAD, LEAD COMPOUNDS
CAS:7439-92-1
RTECS #:OF7525000
Minumum % Wt:65.
Maxumum % Wt:70.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:0.05 MG/M3
ACGIH TLV:0.15 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:SULFURIC ACID
CAS:7664-93-9
RTECS #:WS5600000
Minumum % Wt:11.
Maxumum % Wt:14.
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:ANTIMONY
CAS:7440-36-0
RTECS #:CC4025000
Minumum % Wt
:1.
Maxumum % Wt:2.
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.
OSHA PEL:0.5 MG/M3
ACGIH TLV:0.01 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:COPPER
CAS:7440-50-8
RTECS #:GL5325000
< Wt:1.
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Minumum % Wt:3.5
Maxumum % Wt:4.5

m % Wt:10.
Maxumum % Wt:15.

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

LD50 LC50 Mixture:LD50 (ORAL, RAT) 2140 MG/KG
Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:YES
Health Hazards Acute and Chronic:ACUTE ; TISSUE DESTRUCTION ON CONTACT. MAY CAUSE 2ND AND 3RD DEGREE BURNS OR BLINDNESS. INGESTION WILL CAUSE CORROSIVE BURNS ON CONTACT. MAY BE FATAL IF SWALLOWED. CHRONIC - INHALATION OF MISTS MA
Y CA USE UPPER RESPIRATORY
IRRITATION.
Explanation of Carcinogenicity:CONTAINS ARSENIC AND LEAD.
Effects of Overexposure:IRRITATION AND BURNING OF EXPOSED TISSUES
Medical Cond Aggravated by Exposure:RESPIRATORY DISORDERS MAY BE AGGRAVATED BY PROLONGED INHALATION OF MISTS.

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

First Aid:OBTAIN MEDICAL ATTENTION IMMEDIATELY. INHALED: REMOVE FROM EXPOSURE TO FRESH AIR IMMEDIATELY. IF NOT BREATHING, GIVE ARTIFICIAL RE
SPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
EYES: IMMEDIATELY FLUSH EYE WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. OCCASIONALLY LIFTING THE UPPER AND LOWER LIDS. DO NOT ALLOW VICTIM TO RUB OR KEEP EYES CLOSED. SKIN: FLUSH WITH LARGE AMOUNT OF RUNNING WATER F OR AT LEAST 15 MINUTES. INGESTION: DO NOT INDUCE VOMITING. IF VICTIM IS CONSCIOUS AND ALERT, WASH OUT MOUTH WITH RUNNING WATER. DRINK LARGE AMOUNT OF MILK OR WATER.

========== Fire Fighting M
easures ==========

Extinguishing Media:DRY CHEMICAL, HALON, OR CARBON DIOXIDE
Fire Fighting Procedures:VENTILATE THE AREA WELL. SCBA AND ACID PROTECTIVE CLOTHING ARE RECOMMENDED.
Unusual Fire/Explosion Hazard:HYDROGEN GAS MAY BE PRESENT. HYDROGEN GAS AND ACID MIST IS GENERATED UPON OVERCHARGING OR IN FIRE. VENTILATE AREA.

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

Spill Release Procedures:NEUTRALIZE ANY SPILLED ELECTROLYTE OR EXPOSED BATTER

Y PARTS WITH SODA ASH OR SODIUM BICARBONATE (FORMS CARBON DIOXIDE) UNTIL FIZZING STOPS. PH SHOULD BE NEUTRAL (6-8). NEUTRALIZED, SPILL IS NON-HAZAR DOUS. PLACE BROKEN BATTERY IN A HEAVY GAUGE PLASTIC BAG OR NON-METALLIC CONTAINER. PROVIDE ADEQUATE VENTILATION, HYDROGEN GAS MAY BE GIVEN OFF. KEEP UNTRAINED INDIVIDUALS AWAY FROM SPILLED MATERIALS.
Neutralizing Agent:SODA ASH, SODIUM CARBONATE, SODIUM BICARBONATE, LIME

========== Handling and Storage ==========
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Handling and Storage Precautions:STORE IN A COOL, DRY AREA AWAY FROM COMBUSTIBLES. DO NOT STORE IN SEALED, UNVENTILATED AREAS. AVOID OVERCHARGING AND OVERHEATING. DO NOT USE ORGANIC SOLVENTS OR OTHER THAN RECOMMENDED CHEMICAL CLEANER S ON THE BATTERIES.
Other Precautions:DO NOT TOUCH BROKEN OR LEAKING BATTERIES. AVOID MECHANICAL OR ELECTRICAL ABUSE. AVOID SHORT CIRCUITS. KEEP BATTERIES AWAY FROM SMALL CHILDREN. STORE IN A WELL VENTILATED AREA. KEEP IGNITION SOU
RCES AW AY FROM CHARGING BATTERIES.

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

Respiratory Protection:NIOSH APPROVED ACID MIST RESPIRATOR, IF OSHA PEL IS EXCEEDED.
Ventilation:GENERAL ROOM VENTILATION SHOULD BE SUFFICIENT DURING NORMAL USE AND HANDLING. RECOMMEND 2 TO 3 ROOM AIR CHANGES PER HOUR TO PREVENT BUILUP OF HYDROGEN GAS.
Protective Gloves:RUBBER OR NEOPRENE FOR LEAKERS
Eye Protection:CHEMICAL GOGGLES OR SAFETY GLASSES WITH SIDESHIELD AND A FULL
FACE SHIELD(LEAK)
Other Protective Equipment:ACID RESISTANT APRON OR CLOTHES
Work Hygienic Practices:DO NOT WEAR METALLIC JEWELRY WHEN WORKING WITH BATTERIES. USE NON-CONDUCTIVE TOOLS ONLY. DISCHARGE STATIC ELECTRICITY PRIOR TO WORKING ON A BATTERY. MAINTAIN AN EYEWASH, FIRE EXTINGUISHER NEARBY.
Supplemental Safety and Health

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

HCC:C1
Boiling Pt:=112.8C, 235.F
Vapor Pres:1 MM @ 145.8
Vapor Density:>1 (AIR=1)
Spec G

ravity:ACID = 1.285 +/- .010
Evaporation Rate & Reference: