DONG HO ELECTRIC CO., LTD. SEOUL OFFICE -- ABSORBED LEAD ACID BATTERY -- 6140-01-389-6178

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

Product ID:ABSORBED LEAD ACID BATTERY
MSDS Date:01/01/1997
FSC:6140
NIIN:01-389-6178
Status Code:A
MSDS Number: CKSRG
=== Responsible Party ===
Company Name:DONG HO ELECTRIC CO., LTD. SEOUL OFFICE
Address:TAL II BLDG 108 - 5 SAMSUNG - DONG,KANG NAM-KU
City:SEOUL KOREA
Info
Phone Num:(02)3440-1690-4 FAX: (02)3440-1616
Emergency Phone Num:(02)3440-1690-4
Resp. Party Other MSDS Num.:KUMI FACTORY: TEL: (0546)463-5484-8
CAGE:TO993
=== Contractor Identification ===
Company Name:DONG HO ELECTRIC CO., LTD. SEOUL OFFICE
Address:TAL II BLDG 108 - 5 SAMSUNG - DONG,KANG NAM-KU
Box:City:SEOUL KOREA
Phone:(02)3440-1690-4 FAX: (02)3440-1616
CAGE:TO993
Company Name:PLAINVIEW BATTERIES INC. (NEWMAX DIVISION)
Address:23 NEWTOWN RD
Box:City:PLAINVIEW
State:NY
ZIP:11803-3691
Countr
y:US
Phone:516-755-3030
CAGE:014V6

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

Ingred Name:LEAD
CAS:7439-92-1
RTECS #:OF7525000
Other REC Limits:NIOSH 0.1 MG/M3
ACGIH TLV:0.15 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:LEAD DIOXIDE
CAS:1309-60-0
RTECS #:OG0700000
Other REC Limits:NIOSH 0.1 MG/M3

Ingred Name:LEAD SULFATE
CAS:7446-14-2
RTECS #:OG4375000
Other REC Limits:NIOSH 0.I MG/M3
OSHA PEL:SEE 1910.1025
ACGIH TLV:0.15 MG/M3
EPA Rpt Qty:100 LBS

:100 LBS

Ingred Name:SULFURIC ACID
CAS:7664-93-9
RTECS #:WS5600000
Other REC Limits:NIOSH 1 MG/M3
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

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Health Hazards Acute and Chronic:UNDER NORMAL CONDITIONS OF USE,
INTERNAL COMPONENTS WILL NOT PRESENT A HEALTH HAZARD. FOLLOWING
INFORMATION IS PROVIDED FOR SULFURIC ACI
D AND LEAD IN EVENT BATTERY
BREAKS. ACUTE: LEAD MAY CAUSE GI UPS ET, LOSS OF APPETITE,
DIARRHEA, CONSTIPATION, DIFFICULTY SLEEPING, FATIGUE. EXPOSURE
WITH SULFURIC ACID MAY LEAD TO IRRITATION OF SKIN, CORNEAL DAMAGE,
IRRITATION OF MUCUS MEMBRANE OF EYES AND UPPER RESPIRATORY SYSTEM
AND LUNGS. CHRONIC: LEAD AND ITS COMPOUNDS MAY CAUSE DAMAGE TO
KIDNEYS AND NERVOUS SYSTEM. LEAD MAY CAUSE REPRODUCTIVE SYSTEM
DAMAGE. SULFURIC ACID MAY LEAD TO CANCER, BRONCHITIS, E ROSIO
N OF
TOOTH ENAMAL.
Explanation of Carcinogenicity:TESTING SHOWED THAT THERE IS
INSUFFICIENT EVIDENCE TO SHOW THAT LEAD CAN OR CANNOT CAUSE CANCER.
Effects of Overexposure:LEAD : GI UPSET, LOSS OF APPETITE, DIARRHEA
CONSTIPATION, CRAMPING, DIFFICULTY IN SLEEPING, FATIGUE. SULFURIC
ACID IRRITATION OF SKIN, CORNEAL DAMAGE OF EYES, IRRITATION OF
MUCUS MEMBRANE OF EYES AND UPPER RESPIRATORY SYSTEM , LUNGS.
CHRONIC EFFECTS: LEAD AND ITS COMPOUNDS MAY CAUSE CHRONIC DAMAGE TO

KIDNEYS, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM, SULFURIC ACID MAY
LEAD TO CANCER, CHRONIC BRONCHITI S, EROSION OF TOOTH ENAMEL.
Medical Cond Aggravated by Exposure:INORGANIC LEAD AND ITS COMPOUNDS
CAN AGGRAVATE CHRONIC FORMS OF KIDNEY, LIVER, AND NEUROLOGIC
DISEASE. CONTACT OF SULFURIC ACID WITH THE SKIN MAY AGGRAVATE SKIN
DISEASE.

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

First Aid:INHALATION: REMOVE FROM EXPOSURE AND CONSULT PHYSICIAN. IF
ANYADV

ERSE AFFECTS DEVELOP. SKIN: WASH THOROUGHLY WITH SOAP AND WATER, IF ELECTROLYTE COMES INTO CONTACT WITH CLOTHING, REMOVE AND DO NOT WEA R AGAIN UNTIL CLEANED. EYES: IMMEDIATELY RINSE WITH COOL RUNNING WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION AFTER RINSING. INGESTION: LEAD/LEAD COMPOUNDS: CONSULT A PHYSICIAN. ELECTROLYTE: DO NOT INDUCE VOMITING. REFER TO A PHYSICIAN IMMEDIATELY.

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

Extinguish
ing Media:DRY CHEMICAL, FOAM OR CO2.
Fire Fighting Procedures:USE POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS.
Unusual Fire/Explosion Hazard:HYDROGEN AND OXYGEN GASES ARE PRODUCED IN THE CELLS DURING NORMAL BATTERY OPERATION (HYDROGEN AND OXYGEN SUPPORTS COMBUSTION). THESE GASES ENTER THE AIR THROUGH THE VENT CAPS. TO AVOID CHANCE OF A FIR E OR EXPLOSION, KEEP SPARKS AND OTHER SOURCES OF IGNITION AWAY FROM THE BATTERY.

========== Accidental Release Measure
s ==========

Spill Release Procedures:REMOVE COMBUSTIBLE MATERIALS AND ALL SOURCES OF IGNITION. COVER SPILL WITH SODA ASH (SODIUM CARBONATE): MIXTURE IS NEUTRAL THEN COLLECT RESIDUE AND PLACE IN A DRUM OR OTHER SUITABLE CONTAINER. DISPOSE OF AS HAZARDOUS WASTE. WEAR ACID-RESISTANT BOOTS, FACESHIELD, CHEMICAL SPLASH GENITALS, AND ACID RESISTANT GLOVES. DON'T RELEASE UNNATURALIZED ACID.

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

Handling an
d Storage Precautions:NONE REQUIRED.
Other Precautions:FOLLOWING CONTACT WITH INERNAL BATTERY COMPONENTS, WASH HANDS THOROUGHLY BEFORE EATING, DRINKING, OR SMOKING.

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

Respiratory Protection:NONE REQUIRED.
Ventilation:GOOD ROOM VENTILATION IS REQUIRED FOR BATTERIES UTILIZED FOR STANDBY. NEVER RE-CHARGE BATTERIES IN AN UNVENTILATED AREA.
Protective Gloves:USE VINYL COATED OR PVC GLOVES.
Eye Protection:SAFETY GLASSES.
Othe

r Protective Equipment:HAND, ARMS, BODY, VINYL COATED, PVC. SAFETY SHOES ARE RECOMMENDED WHEN HANDLING BATTERIES. ALL FOOTWEAR MUST MEET REQUIREMENTS OF ANSI Z41.1 -REV.
Supplemental Safety and Health

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

HCC:Z4
Appearance and Odor:OBJECT CONSISTING OF TRANSPARENT TO OPAQUE CASE AND SEALED COVER. ODORLESS.

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

Stability Indicator/Materials to Avoid:YES
LEAD/LEAD COMPOUNDS: POTASSIUM, CARBIDE, SULFIDES, PEROXIDES, PHOSPHORUS, SULFUR, SULFURIC ACID: HYDROGEN. SULFUR DIOXIDE, SULFUR TRIOXIDE.
Stability Condition to Avoid:SPARKS AND OTHER SOURCES OF IGNITION.
Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

Waste Disposal Methods:ELECTROLYTE: NATURALIZE AS ABOVE FOR A SPILL, RESIDUE AND PLACE IN A DRUM OR SUITABLE CONTAINER. DISPOSE OF AS HAZARDOUS WASTE. DO NO
T FLUSH LEAD CONTAMINATED ACID TO SEWER.
BATTERIES: SEND TO LEAD SM ELTER FOR RECIAMNATION FOLLOWING APPLICABLE FEDERAL, STATE, AND LOCAL REGULATION.