

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

Inf

o 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

Count

ry: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 0.1 MG/M3

OSHA PEL:SEE 1910.1025

ACGIH TLV:0.15 MG/M3

EPA Rpt Qty:100 LBS

y: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 AC

ID 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 ROSI

ON OF

TOOTH ENAMEL.

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
ANYAD

VERSE AFFECTS DEVELOP. SKIN: WASH THOROUGHLY WITH SOAP AND WATER, IF ELECTROLYTE COMES INTO CONTACT WITH CLOTHING, REMOVE AND DO NOT WEAR 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 =====

Extinguis

hing 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 FIRE OR EXPLOSION, KEEP SPARKS AND OTHER SOURCES OF IGNITION AWAY FROM THE BATTERY.

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

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 GOGGLES, AND ACID RESISTANT GLOVES. DON'T RELEASE UNNATURALIZED ACID.

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

Handling a

nd Storage Precautions: NONE REQUIRED.

Other Precautions: FOLLOWING CONTACT WITH INTERNAL 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.

Oth

er 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 N

OT FLUSH LEAD CONTAMINATED ACID TO SEWER.

BATTERIES: SEND TO LEAD SM ELTER FOR RECIAMNATION FOLLOWING APPLICABLE FEDERAL, STATE, AND LOCAL REGULATION.

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing th

is

document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.