

JOHNSON CONTROLS INC GLOBE BATTERY DIV -- LEAD ACID BATTERY (SEE SUPPLEMENTAL) --
6140-01-433-1883

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

Product ID:LEAD ACID BATTERY (SEE SUPPLEMENTAL)

MSDS Date:09/15/1993

FSC:6140

NIIN:01-433-1883

MSDS Number: CKSPT

=== Responsible Party ===

Company Name:JOHNSON CONTROLS INC GLOBE BATTERY DIV

Address:5757 N GREEN BAY AVE

Box:591

City:MILWAUKEE

State:WI

ZIP:53201

Co

Country:US

Info Phone Num:414-228-2746/800-424-9300(CHEMTREC)

Emergency Phone Num:(800)424-9300

Resp. Party Other MSDS Num.:LB

Chemtrec Ind/Phone:(800)424-9300

CAGE:25244

=== Contractor Identification ===

Company Name:BATTERY OUTLET INC

Address:1608 CAMPOSTELLA RD

Box:City:CHESAPEAKE

State:VA

ZIP:23324

Country:US

Phone:757-545-4442

Contract Num:SP0411-01-M-EJ51

CAGE:0FGN2

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:SP0411-00-M-EK69
CAGE:1U269
Company Name:JOHNSON CONTROLS INC GLOBE BATTERY DIV
Address:5757 N GREEN BAY AVE
Box:591
City:MILWAUKEE
State:WI
ZIP:53201
Country:US
Phone:800-365-7777
CAGE:25244

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Composition/Information on Ingredients
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Ingred Name:LEAD
CAS:7439-92-1
RTECS #:OF7525000
= Wt:34.
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
= Wt:31.

Ingred Name:LEAD SULFATE
CAS:7
446-14-2
RTECS #:OG4375000
= Wt:1.
OSHA PEL:SEE 1910.1025
ACGIH TLV:0.15 MG/M3
EPA Rpt Qty:100 LBS
DOT Rpt Qty:100 LBS

Ingred Name:SULFURIC ACID, (35%), BATTERY ELECTROLYTE (ACID)
CAS:7664-93-9
RTECS #:WS5600000
= Wt:34.
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

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Hazards Identification
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Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
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Health Hazards Acute and Chronic: INHALATION: ACID MIST GENERATED DURING BATTERY FORMATION MAY CAUSE RESPIRATORY IRRITATION. SPILLAGE OF ACID FROM BATTERIES IN CONFINED AREAS MAY ALSO LEAD TO EXPOSURE TO SULFURIC ACID MIST. SKIN CONTACT: BATTERY ELECTROLYTE (ACID) MAY CAUSE IRRITATION, CONTACT DERMATITIS. SKIN ABSORPTION: SKIN ABSORPTION IS NOT A SIGNIFICANT ROUTE OF ENTRY. EYE CONTACT: BATTERY ELECTROLYTE (ACID) WILL IRRITATE THE EYES UPON CONTACT. INGESTION: HANDS

CONTAMINATED BY CONTACT WITH INTERNAL COMPONENTS OF A BATTERY CAN CAUSE INGESTION OF LEAD/LEAD COMPOUNDS. HANDS SHOULD BE WASHED PRIOR TO EATING, DRINKING, OR SMOKING.

Explanation of Carcinogenicity: IARC HAS CLASSIFIED "STRONG INORGANIC ACID MIST CONTAINING SULFURIC ACID" AS A CATEGORY 1 CARCINOGEN. INORGANIC ACID MIST (SULFURIC ACID MIST) IS NOT GENERATED UNDER NORMAL USE OF THIS PRODUCT. MISUSE OF THE PRODUCT, SUCH AS OVERCHARGING, MAY HOWEVER RESULT IN THE GENERATION OF

SULFURIC ACID MIST.

Effects of Overexposure: ACUTE EFFECTS OF OVEREXPOSURE TO LEAD COMPOUNDS ARE: GI (GASTROINTESTINAL) UPSET WHICH MAY BE LOSS OF APPETITE, DIARRHEA AND/OR CONSTIPATION WITH CRAMPING, DIFFICULTY IN SLEEPING, AND FATIGUE. EXPOSURE AND/OR CONTACT WITH BATTERY ELECTROLYTE (ACID) MAY LEAD TO ACUTE IRRITATION OF THE SKIN, CORNEAL DAMAGE OF THE EYES, AND IRRITATION OF THE MUCOUS MEMBRANES OF THE EYES AND UPPER RESPIRATORY SYSTEM INCLUDING LUNGS. LEAD AND

ITS COMPOUNDS MAY CAUSE CHRONIC ANEMIA, DAMAGE TO THE KIDNEYS AND NERVOUS SYSTEM. LEAD MAY ALSO CAUSE REPRODUCTIVE SYSTEM DAMAGE AND CAN AFFECT DEVELOPING FETUSES IN PREGNANT WOMEN.

Medical Cond Aggravated by Exposure: INORGANIC LEAD & ITS COMPOUNDS CAN AGGRAVATE CHRONIC FORMS OF KIDNEY, LIVER & NEUROLOGIC DISEASES. CONTACT OF BATTERY ELECTROLYTE WITH THE SKIN MAY AGGRAVATE SKIN DISEASES SUCH AS ECZEMA.

===== First Aid Measures =====
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First Aid: INHALATION: REMOVE FROM EXPOSURE AND CONSULT A PHYSICIAN IF ANY OF THE ACUTE EFFECTS LISTED ABOVE DEVELOP. SKIN: WASH THOROUGHLY WITH SOAP AND WATER. IF ACID IS SPLASHED ON CLOTHING, REMOVE AND DISCARD. IF ACID IS SPLASHED IN SHOES, REMOVE THEM IMMEDIATELY AND DISCARD. ACID CANNOT BE REMOVED FROM LEATHER. EYES: IMMEDIATELY RINSE WITH COOL RUNNING WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION AFTER RINSING. INGESTION: LEAD/LEAD COMPOUNDS: CONSULT

A PHYSICIAN. BATTERY ELECTROLYTE (ACID): DO NOT INDUCE VOMITING. REFER TO A PHYSICIAN IMMEDIATELY.

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Fire Fighting Measures
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Flash Point:=-259.C, -434.2F

H2

Autoignition Temp:=-580.C, 1076.F

Autoignition Temp Text:H2

Lower Limits:4.1

Upper Limits:74.2

Extinguishing 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 IS FLAMMABLE AND OXYGEN SUPPORTS COMBUSTION. THESE GASES ENTER THE AIR THROUGH THE VENT CAPS. TO AVOID THE CHANCE OF A FIRE OR EXPLOSION, KEEP SPARKS AND OTHER SOURCES OF IGNITION AWAY FROM THE BATTERY.

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Accidental Release Measures
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Spill Release Procedures:REMOVE COMBUSTIBLE MATERIALS AND ALL SOURCES OF IGNITION. CONTAIN SPILL BY DIKING WITH SODA ASH OR QUICKLIME. COVER SP

ILL WITH EITHER CHEMICAL. MIX WELL. MAKE CERTAIN MIXTURE IS NEUTRAL THEN COLLECT RESIDUE AND PLACE IN A DRUM OR OTHER SUITABLE CONTAINER. DISPOSE OF AS HAZARDOUS WASTE. WEAR ACID RESISTANT BOOTS, CHEMICAL FACESHIELD, CHEMICAL SPLASH GOGGLES, AND ACID RESISTENT GLOVES.

Neutralizing Agent:SODA ASH AND QUICKLIME.

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Handling and Storage
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Handling and Storage Precautions:AN EYEWASH FOUNTAIN AND SAFETY SHOWER SHOULD BE LOCATED IN OR NEAR

THE PRODUCTION OR STORAGE AREAS(S) FOR LEAD/ACID BATTERIES. SUCH STORAGE AREAS SHOULD BE EQUIPPED WITH A CONTAINMENT FACILITY WHICH CAPTURES SPILLS OF ACID SO THAT THEY MAY BE NEUTRALIZED, COLLECTED, AND DISPOSED OF PROPERLY.

Other Precautions:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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Exposure Controls/Personal Protection
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Respiratory Protection:NONE REQUIRED UNDER NORMAL HANDLING CONDITIONS. DURING BATTERY FORMATION (HIGH-RATE CHARGE CONDITION), A

CID MIST

CAN BE GENERATED WHICH MAY CAUSE RESPIRATORY IRRITATION. IF IRRITATION OCCURS, WEAR A RESPIRATOR SUITABLE FOR PROTECTION AGAINST ACID MIST.

Ventilation:STORE LEAD/ACID BATTERIES WITH ADEQUATE VENTILATION. ROOM VENTILATION IS REQUIRED FOR BATTERIES UTILIZED FOR STANDBY POWER GENERATION.

Protective Gloves:VINYL COATED, PVC, GAUNTLET TYPE GLOVES WITH ROUGH FINISH.

Eye Protection:CHEMICAL SPLASH GOGGLES,VISOR-GOGS OR A CHEMICAL FACESHIELD OVER SAFETY GLASSES

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er Protective Equipment:SAFETY SHOES WORN WITH RUBBER/NEOPRENE BOOTS OR STEEL-TOED RUBBER/NEOPRENE BOOTS TO BE WORN OVER SOCKS. PLACE PANTS LEGS OVER BOOTS TO KEEP ACID OUT OF BOOTS.

Work Hygienic Practices:AN EYEWASH FOUNTAIN AND SAFETY SHOWER SHOULD BE LOCATED IN OR NEAR THE PRODUCTION OR STORAGE AREAS(S) FOR LEAD/ACID BATTERIES.

Supplemental Safety and Health

USA BATTERY CARRIER TO LIFT A BATTERY OR PLACE HANDS AT OPPOSITE CORNERS TO AVOID SPILLING ACID THROUGH THE VENTS.

AVOID CONTACT

WITH INTERNAL COMPONENTS OF THE BATTERIES. NEVER RECHARGE BATTERIES IN AN UNVENTILATED, ENCLOSED SPACE. CELL ENERGY P/N: 31P-PHD.

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Physical/Chemical Properties
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HCC:C1

Boiling Pt:=1755.C, 3191.F

B.P. Text:LEAD

Melt/Freeze Pt:=327.4C, 621.3F

M.P/F.P Text:LEAD

Vapor Pres:11.7 ACID

Vapor Density:3.4ACID

Spec Gravity:1.210-1.300 ACID

Evaporation Rate & Reference:NOT DETERMINED

Solubility in Water:100% ACID

Appearance and Odor:BATTERY

ELECTROLYTE (ACID) IS A CLEAR TO CLOUDY LIQUID WITH SLIGHT ACIDIC ODOR.

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Stability and Reactivity Data
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Stability Indicator/Materials to Avoid:YES

LEAD/ACID COMPOUNDS: POTASSIUM, CARBIDES, SULFIDES, PEROXIDES, PHOSPHORUS SULFUR. BATTERY ELECTROLYTE (ACID): COMBUSTIBLE MATERIALS, STRONG REDUCING AGENTS, MOST METALS, CARBIDES, ORGANIC MATERIALS, CHLORATES, NITRATES, PIC

Stability Condition to Avoid:SPARKS AND OTHER SOURCES OF IGNITION MAY

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GNITE HYDROGEN GAS. HIGH TEMPERATURE. BATTERY ELECTROLYTE(ACID) WILL REACT WITH WATER TO PRODUCE HEAT.

Hazardous Decomposition Products:LEAD/LEAD COMPOUNDS: OXIDES OF LEAD AND SULFUR. BATTERY ELECTROLYTE (ACID): HYDROGEN, SULFUR DIOXIDE, SULFUR TRIOXIDE.

===== Toxicological Information =====

Toxicological Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

===== Ecological Information =====

Ecological:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

Waste Disposal Methods:BATTERY ELECTROLYTE (ACID): NEUTRALIZE AS ABOVE FOR A SPILL, COLLECT RESIDUE & PLACE IN A DRUM OR SUITABLE CONTAINER. DISPOSE OF AS HAZARDOUS WASTE. DO NOT FLUSH LEAD CONTAMINATED ACID TO SEWER. BATT ERIES: SENT TO LEAD SMELTER FOR RECLAMATION FOLLOWING APPLICABLE FEDERAL, STATE & LOCAL REGULATIONS.

===== Regulatory Information =====
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SARA Title III Information:THE CONTENTS OF THIS PRODUCT ARE TOXIC CHEMICALS THAT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 302 AND 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (40 CFR 355 AND 372).

Federal Regulatory Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

State Regulatory Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

===== Other Information =====

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