

JOHNSON CONTROLS INC GLOBE BATTERY DIV -- LEAD ACID BATTERY; ELECTRIC STORAGE BATTERY -- 6140-01-433-1883

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

Product ID:LEAD ACID BATTERY; ELECTRIC STORAGE BATTERY

MSDS Date:03/01/1999

FSC:6140

NIIN:01-433-1883

Status Code:A

MSDS Number: CLMFT

=== Responsible Party ===

Company Name:JOHNSON CONTROLS INC GLOBE BATTERY DIV

Address:5757 N GREEN BAY AVE

Box:591

City:MIL

WAUKEE

State:WI

ZIP:53201

Country:US

Info Phone Num:800-365-7777

Emergency Phone Num:(800) 424-9300

Resp. Party Other MSDS Num.:L8

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-W-E682

CAGE:0FGN2

Company Name:JOHNSON CONTROLS INC GLOBE BATTERY DIV

Address:5757 N GREEN BAY AVE

Box:591

City:MILWAUKEE

State:WI

ZIP:5320

1  
Country:US  
Phone:800-365-7777  
CAGE:25244

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

Ingred Name:LEAD  
CAS:7439-92-1  
RTECS #:OF7525000  
= Wt:34.  
OSHA PEL:50 UG/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  
= Wt:31.  
OSHA PEL:50 UG/M3  
ACGIH TLV:150 UG/M3

Ingred Name:LEAD SULFATE  
CAS:7446-14-2  
RTECS #:OG4375000  
&lt; Wt:1.  
OSHA PEL:SEE 1910.1025  
ACGIH TLV:0.15 MG/M3  
EPA Rpt Qty:100 LBS  
DOT Rpt Qty:100 L  
BS

Ingred Name:SULFURIC ACID (34%) (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

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

LD50 LC50 Mixture:NO DATA PROVIDED BY MANUFACTURER  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:UNKNOWN IARC:YES  
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: BATTERY ELECTROLYTE (ACID) MAY CAUSE IRRITATIVE CONTACT DERMATITIS. SKIN ABSORPTION: SKIN ABSORPTION IS NOT A SIGNIFICANT ROUTE OF ENTRY. EYE: 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: THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED "STRONG INORGANIC ACID MIST CONTAINING SULFURIC ACID" AS A CATEGORY 1 CARCINOGEN, A SUBSTANCE THAT IS CARCINOGENIC TO HUMANS. THE ACGIH HAS CLASSIFIED "STRONG INORGANIC ACID MIST CONTAINING SULFURIC ACID" AS AN A2 CARCINOGEN (SUSPECTED HUMAN CARCINOGEN). THESE CLASSIFICATIONS DO NOT APPLY

Effects of Overexposure: ACUTE: ACUTE EFFECTS OF OVEREXPOSURE TO LEAD COMPOUNDS ARE GI (GASTROINTESTINAL) UPSET, LOSS OF APPETITE, DIARRHEA. 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. CHRONIC: 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 Condition Aggravated by Exposure: INORGANIC LEAD & ITS COMPOUNDS CAN AGGRAVATE CHRONIC FORMS OF KIDNEY, LIVER & NEUROLOGIC DISEASES. CONTACT OF BATTERY ELECTROLYTE (ACID) WITH THE SKIN MAY AGGRAVATE SKIN DISEASES SUCH AS ECZEMA & CONTACT

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

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.

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

Flash Point:=-259.C, -434.2F

HYDROGEN

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 OPERATIONS. 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.

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

Spill Release Procedures:REMOVE COMBUSTIBLE MATERIALS & ALL SOURCES OF  
IGNITION. CONTAIN SPILL BY DIKING WITH SODA ASH (SODIUM CARBONATE)  
OR QUICKLI

ME (CALCIUM OXIDE). COVER SPILL WITH EITHER CHEMICAL, MIX  
WELL. MAKE CERTAIN THE MIXTURE IS NEUTRAL, THEN COLLECT RESIDUE &  
PLACE IN A DRUM OR OTHER SUITABLE CONTAINER. DISPOSE OF AS A  
HAZARDOUS WASTE. WEAR ACID-RESISTANT BOOTS, CHEMICAL FACE SHIELD,  
CHEMICAL SPLASH GOGGLES,

Neutralizing Agent:DLA-HMIS: FOR ELECTROLYTE-SODA ASH.

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

Handling and Storage Precautions:MAKE CERTAIN VENT CAPS ARE ON TIGHTLY.  
PLACE A

MINIMUM OF TWO LAYERS OF CORRUGATED CARDBOARD BETWEEN  
LAYERS OF BATTERIES. WHEN STACKING IN TRAILER, STACK NO MORE THAN  
THREE LAYERS HIGH. USE A BATTERY CARRIER TO LIFT A BATTERY OR  
PLACE HANDS AT OPPOSITE CORNERS TO AVOID SPILLING ACID THROUGH THE  
VENT

Other Precautions:AN EYEWASH FOUNTAIN AND SAFETY SHOWER SHOULD BE  
LOCATED IN OR NEAR THE PRODUCTION OR STORAGE AREAS FOR LEAD/LEAD  
ACID BATTERIES. SUCH STORAGE AREAS SHOULD BE EQUIPPED WITH A  
CONTAINMENT FACILITY WHI

CH CAPTURES ACID SPILLS SO THAT THEY MAY  
BE NEUTRALIZED, COLLECTED, AND DISPOSED OF PROPERLY.

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

Respiratory Protection:NONE REQUIRED UNDER NORMAL HANDLING CONDITIONS.  
DURING BATTERY FORMATION (HIGH-RATE CHARGE CONDITION), ACID 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. NEVER RECHARGE BATTERIES

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

Eye Protection:CHEMICAL SPLASH GOGGLES ARE PREFERRED. ALSO ACCEPTABLE  
ARE "VISOR -GOGS" OR A

Other Protective Equipment:SAFETY SHOES WORN WITH RUBBER OR NEOPRENE  
BOOTS OR STEEL-TOED RUBBER OR NEOPRENE BOOTS WORN OVER SOCKS. PLACE  
PANTS LEGS OVER BOOTS TO KEEP ACID  
OUT OF BOOTS. ALL FOOTWEAR MUST  
MEET REQUIREMENTS OF ANSI

Work Hygienic Practices:WASH HANDS THOROUGHLY BEFORE EATING, DRINKING,  
OR SMOKING AFTER HANDLING BATTERIES.

Supplemental Safety and Health

NEVER RECHARGE BATTERIES IN AN UNVENTILATED, ENCLOSED SPACE. MAKE  
CERTAIN VENT CAPS ARE ON TIGHTLY. PLACE A MINIMUM OF TWO LAYERS OF  
CORRUGATED CARDBOARD BETWEEN LAYERS OF BATTERIES. WHEN STACKING IN  
TRAILER, STACK NO MORE THAN THREE LAYERS HIGH.USE A BATTERY CARRIER  
TO LIFT BA  
TTERY OR PLACE HANDS AT OPPOSITE CORNERS

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

HCC:C1

Boiling Pt:=1755.C, 3191.F

B.P. Text:LEAD BATT. ELECTROLYTE

Melt/Freeze Pt:=327.4C, 621.3F

M.P/F.P Text:LEAD

Vapor Pres:11.7 BATTERY ELECTROLYTE

Vapor Density:3.4

Spec Gravity:1.210-1.300 BATTERY ELECT

Evaporation Rate & Reference:NOT DETERMINED

Solubility in Water:LEAD AND LEAD DIOXIDE ARE

Appearance and Odor:SOLID;LIQUID;BATTERY ELECTROLYTE (ACID) IS A CLEAR  
TO CLOUDY

LIQUID

Percent Volatiles by Volume:NOT DETERMIN

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

Stability Indicator/Materials to Avoid:YES

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

Stability Condition to Avoid:SPARKS AND OTHER SOURCES OF IGNITION MAY IGNITE HYDROGEN GAS.

Hazardou

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

Conditions to Avoid Polymerization:WILL NOT OCCUR. AVOID HIGH TEMPERATURE. BATTERY ELECTROLYTE (ACID) WILL REACT WITH WATER TO PRODUCE HEAT.

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

Toxicological Information:IARC HAS CLASSIFIED "STRONG INORGANIC ACID MIST CONTAINING SULFURIC ACID" AS A CATEGORY 1 CARCINOGEN

, A

SUBSTANCE THAT IS CARCINOGENIC TO HUMANS. THE ACGIH HAS CLASSIFIED "STRONG INORGANIC ACID MIST C ONTAINING SULFURIC ACID" AS AN A2 CARCINOGEN (SUSPECTED HUMAN CARCINOGEN). THESE CLASSIFICATIONS DO NOT APPLY TO LIQUID FORMS OF SULFURIC ACID OR SULFURIC ACID SOLUTIONS FOUND IN BATTERIES. IARC HAS C LASSIFIED LEAD AS AN A3 CARCINOGEN (ANIMAL CARCINOGEN).

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

Ecological:NO DATA PROVIDED BY MANUFACTURER

==

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

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

===== MSDS Transport Information =====

Transpo

rt Information:DOT, IATA, IMO DESCRIPTIONS: BATTERY, WET, FILLED  
WITH ACID, UN2794, CLASS 8.

=====  
Regulatory Information  
=====

SARA Title III Information:THE CONTENTS OF THIS PRODUCT ARE TOXIC  
CHEMICALS THAT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION  
302 AND SECTION 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 MANUFACTURER  
State Regulat

ory Information:NO DATA PROVIDED BY MANUFACTURER

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

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