Product ID:NP24-12B STORAGE BATTERY MSDS Date:05/20/1986 FSC:6140 NIIN:01-296-6194 MSDS Number: BHWYL === Responsible Party === Company Name: YUASA BATTERY AMERICA INC Address:9728 ALBURTIS AVE **City:SANTA FE SPRINGS** State:CA ZIP:90670 Country:US Info Phone Num:213-949-4266 **Emergency Phone** Num:800-423-4667 Preparer's Name:L.H.BIGGINS CAGE:77280 === Contractor Identification === Company Name: YUASA-EXIDE INC Address:2366 BERNVILLE ROAD Box:14145 City:READING State:PA ZIP:19612-4145 Country:US Phone:610-208-1975 CAGE:77280

Ingred Name:SULFURIC ACID (SARA III) CAS:7664-93-9 RTECS #:WS5600000 OSHA PEL:1 MG/M3 ACGIH TLV:1 MG/M3; 9192 EPA Rpt Qty:1000 LBS DOT Rpt Qty:1000 LBS

Ingred Name:LEAD (SARA III) CAS:7439-9 2-1 RTECS #:OF7525000 OSHA PEL:0.05 MG/M3;1910.1025 ACGIH TLV:0.15 MG/M3;DUST 9192 EPA Rpt Qty:1 LB DOT Rpt Qty:1 LB

LD50 LC50 Mixture:ORAL RAT LD50 IS NOT KNOWN Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO Health Hazards Acute and Chronic:PRODUCT CONTAINS LEAD AND SULFURIC ACID. SULFURIC ACID IS A CORROSIVE CAUSING BURNS TO BODY TISSUES. LEAD IS TOXIC AND SOME LEAD COMPOUNDS ARE LISTED AS CARCINOGENIC. CONTACT WITH EITHER IS HIGHLY UNLIKELY TO OCCUR UNLESS THE CASE IS BROKEN OR SPILLED, THEN ONLY CONTACT WITH THE ACID IS LIKELY. Explanation of Carcinogenicity:LEAD COMPOUNDS ARE LISTED AS CARCINOGENIC IN ANIMALS AND POSSILBY IN HUMANS. Effects of Overexposure:CONTACT WITH SULFURIC ACID IS THE MOST LIKELY EXPOSURE, PRODUCING IRRITATION OR BURNS TO THE BODY TISSUE CONTACTED.

Medical Cond Aggravated by Exposure:NONE

First Aid:FIRST AID IS GIVEN FOR SULFURIC ACID CONTACT. EYE:FLUSH W/WATER 15 MIN, HOLD LIDS OPEN. SKIN:WASH WITH SOAP & WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE. INHALED:REMOVE TO FRESH A IR. INGESTED:DO NOT INDUCE VOMITING. GIVE 2 LARGE GLASSES OF MILK OR WATER AND GET IMMEDIATE MEDICAL CARE. GIVE NOTHING BY MOUTH IF UNCONSCIOUS. IF IRRITATION PERSISTS OR IS SEVERE,SEE A DOCTOR.

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Flash Point:NON-FLAMMABLE

Extinguishing Media:USE WATER FOG, CARBON DIOXIDE, OR DRY CHEMICAL. Fire Fighting Procedures:FIRE FIGHTERS SHOULD USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT WHEN FIGHTING CHEMICAL FIRE. USE WATER SPRAY TO COOL NEARBY CONTAINERS EXPOSED TO FIRE. Unusual Fire/Explosion Hazard:SULFURIC ACID REACTS WITH METALS TO FORM HYDROGEN, AFLAMMABLE SOMETIMES EXPLOSIVE GAS.

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Spill Release Procedures: IF ACID IS SPILLED, NEUTRALIZE. PLACE REMAINDER IN AN ACID RESISTANT CONTAINER FOR RECYCLE OF THE LEAD. Neutralizing Agent: SODIUM BICARBONATE OR LIME

Handling and Storage Precautions:STORE IN COOL, DRY AREA. PROTECT FROM PHYSICAL DAMAGE. PROTECT TERMINALS FROM SHORT CIRCUITS. Other Precautions:READ MANUFACTURERS LITERATURE AND FOLLOW INSTRUCT

IONS.

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

Respiratory Protection: RESPIRATOR WILL NOT NORMALLY BE NECESSARY. USE NIOSH/MSHA APPROVED RESPIRATOR FOR ACID DUST/MIST IF EXPOSURE IS ABOVE THE TLV/PEL. SEE 29 CFR 1910.134 FOR REGULATIONS PERTAINING TO RESPIRATOR USE.

Ventilation:NOT NORMALLY REQUIRED. USE LOCAL EXHAUST DURING CHARGING CYCLES TO AVOID AN EXPLOSIVE BUILD UP OF HYDROGEN GAS.

Protective Gloves:NONE (RUBBER IF ACID IS LEAKING)

Eye Protect

ion:SAFETY GLASSES/SPLASH GOGGLES (LIQUID)

Other Protective Equipment:NORMAL WORK CLOTHING. PROTECT WITH IMPERVIOUS APRON AND/OR BOOTS IF ACID IS LEAKING.

Work Hygienic Practices: USE GOOD INDUSTRIAL HYGIENE PRACTICE. AVOID ALL CONTACT WITH ACID OR INTERNALS OF THE BATTERY.

ALL CONTACT WITH ACID OR INTERNALS OF THE BATTE

Supplemental Safety and Health

MFR STATES THAT BATTERY IS CLASSED AS AN ARTICLE PER OSHA HAZ COM STD AND INFORMATION SUPPLIED FOR INFORMATION PURPOSES ONLY.

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

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HCC:N1 Boiling Pt:B.P. Text:203F,95C Melt/Freeze Pt:M.P/F.P Text:-338F,-206C Vapor Pres:10 MM Vapor Density:>1 Spec Gravity:1.245-1.295 pH: