

YUASA, INC -- NPG18-12, DRY CHARGE BATTERY -- 6140-01-389-6178

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

Product ID:NPG18-12, DRY CHARGE BATTERY

MSDS Date:05/01/1998

FSC:6140

NIIN:01-389-6178

Status Code:A

MSDS Number: CLCFV

=== Responsible Party ===

Company Name:YUASA, INC

Address:2366 BERNVILLE ROAD

Box:14145

City:READING

State:PA

ZIP:19612-4145

Country:US

Info Phone Num:610-208-1975

Emergency Phone Nu

m:(800)424-9300

Chemtrec Ind/Phone:(800)424-9300

CAGE:TO063

=== Contractor Identification ===

Company Name:YUASA, INC

Address:2366 BERNVILLE ROAD

Box:14145

City:READING

State:PA

ZIP:19612-4145

Country:US

Phone:610-208-1975

CAGE:TO063

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

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

Ingred Name:LEAD

CAS:7439-92-1

RTECS #:OF7525000

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Wt:52.
Other REC Limits:100 UG/M3 (NIOSH)
OSHA PEL:50 UG/M3
ACGIH TLV:150 UG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:ANTIMONY
CAS:7440-36-0
RTECS #:CC4025000
= Wt:.2
OSHA PEL:500 UG/M3
ACGIH TLV:500 UG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:ARSENIC
CAS:7440-38-2
RTECS #:CG0525000
Fraction by Wt: 0.003% %
OSHA PEL:10 UG/M3
ACGIH TLV:200 UG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:CALCIUM
CAS:7440-70-2
RTECS #:EV8040000
= Wt:.02

Ingred Name:TIN
CAS:7440-31-5

RTECS #:XP7320000
OSHA PEL:2000 UG/M3
ACGIH TLV:2000 UG/M3

Ingred Name:ELECTROLYTE (SULFURIC ACID)
CAS:7664-93-9
RTECS #:WS5600000
Minumum % Wt:10.
Maxumum % Wt:30.
OSHA PEL:1000 UG/M3
ACGIH TLV:1000 UG/M3
ACGIH STEL:1000 UG/M3
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:CASE MATERIAL: POLYPROPYLENE, POLYSTYRENE, STYRENE
ACRYLONITRILE, ACRYLONITRITE BUTADIENE STYRENE, STYRENE BUTADIENE,
POLYVINYLCHLORIDE, POLYCARBONATE, HARD RUBBER, POLYETHYLENE
Minumum % Wt:5.
Maxumum % Wt:

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

LD50 LC50 Mixture:NO DATA PROVIDED BY MANUFACTURER

Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES

Reports of Carcinogenicity:NTP:UNKNOWN IARC:YES

Health Hazards Acute and Chronic:ROUTES OF ENTRY: LEAD COMPOUNDS:

HAZARDOUS EXPOSURE CAN OCCUR ONLY WHEN PRODUCT IS HEATED, OXIDIZED OR OTHERWISE PROCESSED OR DAMAGED TO CREATE DUST, VAPOR OR FUME.

INHALATION: LEAD COMPOUNDS: INHALATION OF LEAD DUST OR FUMES MAY

CAUSE IRRITATION OF UPPER RESPIRATORY TRACT AND LUNGS. SKIN

CONTACT: LEAD COMPOUNDS NOT ABSORBED THROUGH THE SKIN. INGESTION:

LEAD COMPOUNDS: ACUTE INGESTION MAY CAUSE ABDOMINAL PAIN, NAUSEA,

VOMITING, DIARRHEA AND SEVERE CRAMPING. SKIN CONTACT: LEAD

COMPOUNDS: NOT ABSORBED THROUGH THE SKIN. EYE CONTACT: LEAD

COMPOUNDS: MAY CAUSE EYE IRRITATION.

Explanation of Carcinogenicity:LEAD COMPOUNDS: LEAD IS LISTED AS A 2B CARCINOGEN, LIKELY IN ANIMALS AT EXTREME DOSES

. PROOF OF

CARCINOGENICITY IN HUMANS IS LACKING AT PRESENT.

Effects of Overexposure:ACUTE: LEAD COMPOUNDS: SYMPTOMS OF TOXICITY

INCLUDE HEADACHE, FATIGUE, ABDOMINAL PAIN, LOSS OF APPETITE,

MUSCULAR ACHES AND WEAKNESS, SLEEP DISTURBANCES AND IRRITABILITY.

CHRONIC: LEAD COMPOUNDS: ANEMIA; NEUROPATHY, PARTICULARLY OF THE

MOTOR NERVES, WITH WRIST DROP; KIDNEY DAMAGE; REPRODUCTIVE CHANGES

IN MALES AND FEMALE.

Medical Condition Aggravated by Exposure:OVEREXPOSURE TO SULFURIC ACID MIST

MAY CAUSE LUNG DAMAGE AND AGGRAVATE PULMONARY CONDITIONS. CONTACT OF SULFURIC ACID WITH SKIN MAY AGGRAVATE SKIN DISEASES SUCH AS ECZEMA AND CONTACT DERMATITIS.

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

First Aid:INHALATION: LEAD: REMOVE FROM EXPOSURE, GARGLE, WASH NOSE AND LIPS; CONSULT PHYSICIAN. INGESTION: LEAD: CONSULT PHYSICIAN

IMMEDIATELY. SKIN: LEAD: WASH IMMEDIATELY WITH SOAP AND WATER.

EYES: LEAD: FLUSH IMMEDIATELY WITH LARGE AMOUNT

TS OF WATER FOR AT
LEAST 15 MINUTES; CONSULT PHYSICIAN.

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

Lower Limits:4.1-HYDROGEN

Upper Limits:74.2-HYDROGE

Extinguishing Media:CO2; FOAM; DRY CHEMICAL. INORGANIC LEAD COMPOUND IS NOT A COMBUSTIBLE MATERIAL, NOR WILL IT EXPLODE UNDER CONDITIONS OF NORMAL USE.

Fire Fighting Procedures:WEAR FULL BODY PROTECTIVE CLOTHING AND SELF CONTAINED BREATHING APPARATUS WITH POSITIVE PRESSURE AND FULL-FACE PIECE.

Unusua

I Fire/Explosion Hazard:HIGHLY FLAMMABLE HYDROGEN GAS IS GENERATED DURING CHARGING AND OPERATION OF BATTERIES. TO AVOID RISK OF FIRE OR EXPLOSION KEEP SPARKS OR OTHER SOURCES OF IGNITION AWAY FROM BATTERIES. DO NOT ALLOW MET ALLIC MATERIALS TO SIMULTANEOUSLY CONTACT NEGATIVE AND POSITIVE TERMINALS OF CELLS AND BATTERIES.

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

Spill Release Procedures:LEAD DUST SHOULD BE VACUUMED OR WET-SWEPT; USE CONTROLS, WHICH MINIMIZE FUGITIVE EMISSIONS; DO NOT USE COMPRESSED AIR.

Neutralizing Agent:DLA-HMIS: SODA ASH OR SODIUM BICARBONATE FOR ELECTROLYTE SPILLS.

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

Handling and Storage Precautions:STORE BATTERIES IN COOL, DRY, WELL-VENTILATED AREAS WITH IMPERVIOUS SURFACES AND ADEQUATE CONTAINMENT IN THE EVENT OF SPILLS. BATTERIES SHOULD ALSO BE STORED UNDER ROOF FOR PROTECTION AGAINST ADVERSE WEATHER CONDITIONS. SEPARATE FR

OM INCOMPATIBLE MATERIALS.

Other Precautions:STORE AND HANDLE ONLY IN AREAS WITH ADEQUATE WATER SUPPLY AND SPILL CONTROL. AVOID DAMAGE TO CONTAINERS. KEEP AWAY FROM FIRE, SPARKS AND HEAT. PRECAUTIONARY LABELING: POISON - CAUSES SEVERE BURNS.

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

Respiratory Protection:NONE REQUIRED UNDER NORMAL CONDITIONS.

Ventilation:STORE AND HANDLE IN WELL-VENTILATED AREA.

Protective Gloves:RUBBER OR PLASTIC ACID-RESISTANT GLOVES WI

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ELBOW-LENGTH GAUNLET FOR USE WHEN

Eye Protection:CHEMICAL GOGGLES OR FACE SHIELD FOR USE WHEN FILLING BATTERIES.

Other Protective Equipment:WEAR COVERALLS OR FULL-BODY COVERING DURING USE. WHEN FILLING BATTERIES USE ACID-RESISTANT APRON. UNDER SEVERE EXPOSURE OR EMERGENCY CONDITIONS, WEAR ACID-RESISTANT CLOTHING AND BOOTS.

Work Hygienic Practices:HANDLE BATTERIES CAUTIOUSLY TO AVOID SPILLS. MAKE CERTAIN VENT CAPS ARE ON SECURELY. AVOID CONTACT WITH INTERNAL COMPONE

NTS. WEAR PROTECTIVE CLOTHING WHEN FILLING OR HANDLING BATTERIES.

Supplemental Safety and Health

DLA-HMIS STAFF NOTE: HCC IS BASED ON PHONE CALL TO ENERSYS (BOUGHT OUT YUASA/YUASA-EXIDE) REP ON 23 APRIL, 2001. BATTERY IS A WET, NON-SPILLABLE. BATTERY MEETS IATA A67 TO BE NON-REGULATED.

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

HCC:Z4

Boiling Pt:>1380.C, 2516.F

Melt/Freeze Pt:=252.2C, 486.F

M.P/F.P Text:486 TO 680 DEG F

Vapor Pres:NA

Spec Gravity:9.6 TO 11

.3 (H2O=1)

Solubility in Water:NEGLIGIBLE

Appearance and Odor:BLuish GRAY METAL, NO APPARENT ODOR.

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

Stability Indicator/Materials to Avoid:YES

LEAD COMPOUNDS: AVOID CONTACT WITH STRONG ACIDS,BASES, HALIDES, HALOGENATES, POTASSIUM NITRATE, PERMANGANATE, PEROXIDES, NASCENT HYDROGEN AND REDUCING AGENTS.

Stability Condition to Avoid:PROLONGED OVERCHARGE; SOURCES OF IGNITION.

Hazardous Decomposition Products:LEAD COMPOUNDS:

HIGH TEMPERATURES

LIKELY TO PRODUCE TOXIC METAL FUME, VAPOR OR DUST; CONTACT WITH STRONG ACID OR BASE OR PRESENCE OF NASCENT HYDROGEN MAY GENERATE HIGHLY TOXIC ARSINE GAS.

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

Toxicological Information:NO DATA PROVIDED BY MANUFACTURER

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

Ecological:NO DATA PROVIDED BY MANUFACTURER.

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

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ste Disposal Methods:SPENT BATTERIES: SEND TO SECONDARY LEAD SMELTER FOR RECYCLING. PLACE NEURALIZED SLURRY INTO SEALED CONTAINERS & HANDLE AS APPLICABLE WITH STATE & FEDERAL REGULATIONS. LARGE WATER-DILUTED SPILLS, AFTER NEUTRALIZATION & TESTING, SHOULD BE MANAGED IN ACCORDANCE WITH APPROVED LOCAL, STATE & FEDERAL REQUIREMENTS. CONSULT STATE ENVIRONMENTAL AGENCY.

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

Transport Information:US DOT: THE TRANSPORTATION OF DRY BATTERIES

(THOSE BATTERIES THAT CONTAIN NO ELECTROLYTE OR RESIDUE) ARE NOT REGULATED BY THE US DOT AS A HAZARDOUS MATERIAL. IATA: THE INTERNATIONAL TRANSPORTATION OF DRY BATTERIES IS NOT REGULATED BY IATA AS A HAZARDOUS MATERIAL. IMDG: THE INTERNATIONAL TRANSPORTATION OF DRY BATTERIES IS NOT REGULATED BY THE IMDG AS A HAZARDOUS MATERIAL. DLA-HMIS STAFF NOTE: BASED ON INFORMATION FROM PHONE CALL TO ENERSYS (BOUGHT OUT YUASA/YUASA-EXIDE) REP ON 23

APRIL, 2001. BATTERY IS A WET, NON-SPILLABLE (BUT MSDS APPLIES). BATTERY MEETS IATA A67 TO BE NON-REGULATED.

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

SARA Title III Information:CERCLA (SUPERFUND) & EPCRA: EPCRA SECTION 312 TIER 2 REPORTING IS REQUIRED FOR BATTERIES IF SULFURIC ACID IS PRESENT IN QUANTITIES OF 500 LBS OR MORE AND/OR IF LEAD IS PRESENT IN QUANTITIES OF 10000 LB S. OR MORE. SUPPLIER NOTIFICATION: THE PRODUCT CONTAINS TOXIC CHEMICALS WHICH MAY BE REPORTABLE UNDER EPCRA SECTION 313 TOXIC CHEMICAL RELEASE INVENTORY (FORM R) REQUIREMENTS. IF YOU ARE A MANUFACTURING FACILITY UNDER SIC CODES 20 THROUGH 39, THE FOLLOWING IS PROVIDED TO ASSIST IN COMPLETING THE REPORTS: LEAD, CAS# 7439-92-1, 53%; ANTIMONY, CAS# 7440-36-0, 0.2%; ARSENIC, CAS# 7440-38-2, 0.003%.

Federal Regulatory Information:SARA SECTION 313 NOTIFICATION DOES NOT APPLY TO BATTERIES (CONSUMER PRODUCT). RCRA: SPENT LEAD-ACID BATTERIES ARE NOT REGULATED AS HAZARDOUS WASTE BY EPA WHEN RECYCLED, HOWEVER, STATE & INTERNATIONAL REGULATIONS MAY VARY. TSCA: INGREDIENTS IN YUASA'S BATTERIES ARE LISTED IN THE TSCA REGISTRY AS FOLLOWS: LEAD (PB), CAS# 7439-92-1; LEAD OXIDE (PBO), CAS# 1317-36-8; LEAD SULFATE, CAS# 7446-14-2; ANTIMONY (SB), CAS# 7440-36-0; ARSENIC (AS), CAS# 7440-38-2; CALCIUM (CA), CAS# 7440-70-2; TIN (SN), 7440-31-5.

State Regulatory Information:NO DATA PROVIDED BY MANUFACTURER.

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

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