

SAFT AMERICA INC PRIMARY BATTERY DIVISION -- NICKEL CADMIUM AIRCRAFT BATTERY --
6140-01-205-3057

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

Product ID:NICKEL CADMIUM AIRCRAFT BATTERY

MSDS Date:10/03/1994

FSC:6140

NIIN:01-205-3057

Status Code:A

MSDS Number: CKCQG

=== Responsible Party ===

Company Name:SAFT AMERICA INC PRIMARY BATTERY DIVISION

Address:711 INDUSTRIAL BLVD

Box:1886

City:VALDOSTA

State:GA

ZI

P:31601-6512

Country:US

Info Phone Num:912-247-2331

Emergency Phone Num:912-247-2331

Chemtrec Ind/Phone:(800)424-9300

CAGE:01306

=== Contractor Identification ===

Company Name:SAFT AMERICA INC PRIMARY BATTERY DIVISION

Address:711 INDUSTRIAL BLVD

Box:1886

City:VALDOSTA

State:GA

ZIP:31601-6512

Country:US

Phone:912-247-2331

CAGE:01306

Company Name:SAFT AMERICA INC.

Address:711 INDUSTRIAL BLVD

Box:1886

City:VALDOSTA

State:GA

ZIP:31602

Country:US

Phone:912-247-2331

Contract Num:SP0430-99-M-AR96

CAGE

:09052

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Composition/Information on Ingredients
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Ingred Name:NICKEL OXIDE

CAS:1313-99-1

RTECS #:QR8400000

= Wt:18.

OSHA PEL:1 MG/M3

Ingred Name:30 % POTASSIUM HYDROXIDE, ELECTROLYTE SOLUTION

CAS:1310-58-3

RTECS #:TT2100000

= Wt:18.

ACGIH STEL:C2 MG/M3

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:CADMIUM OXIDE

CAS:1306-19-0

RTECS #:EV1925000

= Wt:13.

OSHA PEL:5 MCG/M3 DUST

ACGIH TLV:C0.05 MG/M3 FUME

Ingred Name:COPPER

CAS:7440-50-8

RTECS #:GL5325000

= Wt:9

OSHA PEL:1 MG/M3

ACGIH TLV:1 MG/M3

EPA Rpt Qty:5000 LBS

DOT Rpt Qty:5000 LBS

Ingred Name:NYLON II

= Wt:15.

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Hazards Identification
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LD50 LC50 Mixture:NO DATA PROVIDED BY RESPONSIBLE PARTY.

Health Hazards Acute and Chronic:EYES: ELECTROLYTE CONTACT CAUSES RAPID, SEVERE DAMAGE. EXTREMELY CORROSIVE TO EYE TISSUES. NICKEL OXIDE MAY CAUSE IRRITATION. SKIN: ELECTROLYTE CONTACT CAUSES SERIOUS BURNS. CONTACT WITH NICKEL COMPOUNDS MAY CAUSE

SENSITIZATION. INGESTION: ELECTROLYTE CAUSES TISSUE DAMAGE TO THROAT & GASTROINTESTINAL TRACT. INGESTION OF NICKEL COMPOUNDS CAUSE NAUSEA & INTESTINAL DISORDERS. INHALATION: KOH MIST CAUSES IRRITATION OF NASAL MUCOUS MEMBRANES & RESPIRATORY TRACT TISSUES. INHALATION OF CADMIUM OXIDE FUMES CAUSES SYSTEMIC EFFECTS. CHRONIC EXPOSURE TO CADMIUM COMPOUNDS MAY RESULT IN RESPIRATORY EDEMA, BREATHING DIFFICULTY, KIDNEY DAMAGE.

Explanation of Carcinogenicity: NIOSH RECOMMENDS THAT NICKEL AND CADMIUM BE TREATED AS OCCUPATIONAL CARCINOGENS.

Effects of Overexposure: EYES: SEVERE DAMAGE, IRRITATION. SKIN: BURNS, NICKEL ITCH, ECZEMA. INGESTED: NAUSEA. INHALED: DRY THROAT, COUGH, HEADACHE, VOMITING, CHEST PAIN, CHILLS, BREATHING DIFFICULTY, PROSTRATION.

Medical Cond Aggravated by Exposure: NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

First Aid: BATTERY ELECTROLYTE: EYE CONTACT: FLUSH WITH PLENTY OF WATER

FOR AT LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND FLUSH AFFECTED AREAS WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. INGESTION: DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER. IF AVAILABLE GIVE SEVERAL GLASSES OF MILK. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. INHALATION: REMOVE TO FRESH AIR. GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED. GET IMMEDIATE MEDICAL AT

TENTION. NICKEL OXIDE: SKIN CONTACT: WASH WITH COLD WATER AND SOAP.

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

Extinguishing Media: CARBON DIOXIDE (CO₂), SAND.

Fire Fighting Procedures: USE SELF-CONTAINED BREATHING APPARATUS TO AVOID BREATHING TOXIC FUMES. WEAR PROTECTIVE CLOTHING AND EQUIPMENT TO PREVENT POTENTIAL BODY CONTACT WITH ELECTROLYTE SOLUTION OR MIXTURE OF WATER AND SOLUTION. DISCONNECT OR CUT ALL CABLES TO AND FROM BATTERY.

Unusual Fire/Expl

osion Hazard:ELECTROLYTE SOLUTION IS CORROSIVE TO ALL HUMAN TISSUES.IT WILL REACT VIOLENTLY WITH MANY ORGANIC CHEMICALS,ESPECIALLY NITROCARBONS & CHLOROCARBONS. ELECTROLYTE SOLUTION REACTS WITH ZINC,ALUMINUM,TIN & OTHER ACTIVE MATERIALS RELEASING FLAMMABLE HYDROGEN GAS. CADMIUM FUMES MAY BE RELEASED.

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

Spill Release Procedures:ELECTROLYTE SOLUTION SPILLS:SMALL (UP TO 5 GALLONS) :FLUSH WITH WATER AND NEUTRALIZE WITH DILUTE CITRIC ACID.

LARGE:CONTAIN MATERIAL IN SUITABLE CONTAINERS OR HOLDING AREA. DO NOT ALLOW MATERIAL TO ENTER STREAMS OR STORM CONDUITS. RECOVER MATERIAL WITH VACUUM TRUCK AND DISPOSE OF PROPERLY. REPORTABLE QUANTITY: 1000 POUNDS. 40 CFR 117.13.

Neutralizing Agent:FLUSH WITH WATER AND NEUTRALIZE WITH DILUTE CITRIC ACID.

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

Handling and Storage Precautions:THESE CELLS AND THE BATTERIES CONSTRUCT

ED FROM THEM MAY BE HIGHLY CHARGED AND ARE CAPABLE OF HIGH ENERGY DISCHARGE. CARE SHOULD BE TAKEN TO HANDLE CELLS PROPERLY TO AVOID SHORTING OR MISUSE THAT WILL RESULT IN RAPID UNCONTROLLED ELECTRICAL, CHEMICAL, OR HEAT ENERGY RELEASE.

Other Precautions:DO NOT TRANSPORT BATTERIES WITHOUT VENT CAP IN PLACE. WHEN REMOVING BATTERY FROM SERVICE VISUALLY INSPECT FOR LEAKAGE PRIOR TO HANDLING. IF LEAKAGE HAS OCCURRED FOLLOW SPILL MANAGEMENT PROCEDURES. DO NOT ALLOW AN EXPOSED FLAME OR SPARK TO COME NEAR THE CELLS.

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

Respiratory Protection:USE NIOSH/MSHA APPROVED RESPIRATOR DURING LEVEL CHARGING TO MAINTAIN EXPOSURE LEVELS BELOW THE TWA.

Ventilation:PERFORM LEVEL CHARGING PROCEDURES IN A WELL VENTILATED AREA. BATTERY OPERATING AREAS MUST BE WELL VENTILATED TO REMOVE NORMAL GASES GENERATED.

Protective Gloves:WATER-INSOLUBLE, NON-IMPERMEABLE GLOVES, IE SYNTHETIC RUBBER.

Eye Protectio

n:USE SPLASH GOGGLES OR FACE SHIELD WHENEVER HANDLING A BATTERY.

Other Protective Equipment:RUBBER BOOTS, RUBBER APRON OR RAINWEAR OR EQUIVALENT.

Work Hygienic Practices:NO DATA PROVIDED BY RESPONSIBLE PARTY.

Supplemental Safety and Health

SAFT P/N: 019653-000

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

HCC:B1

Spec Gravity:1.250-1.30

Evaporation Rate & Reference:N/D

Solubility in Water:COMPLETELY SOLUBLE

Appearance and Odor:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

ELECTROLYTE WILL REACT WITH ALUMINUM, ZINC, TIN AND OTHER ACTIVE METALS, ACID, CHLORINATED AND AROMATIC HYDROCARBONS, NITROCARBONS, HALOCARBONS. TRICHLOROETHYLENE WILL REACT WITH ELECTROLYTE SOLUTION TO FORM DICHLORACTYLENE

Hazardous Decomposition Products:NICKEL OXIDE, CADMIUM, CADMIUM OXIDE, AND POTASSIUM HYDROXIDE. NOTE THAT NORMAL REACTIONS INSIDE BATTERY LIBERATE FLAMMABLE HYDROGEN GAS. BATTERY MUST BE VENTED TO ATMOSPHERE.

Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

Toxicological Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

Ecological:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

Waste Disposal Methods:THE STORAGE BATTERY IS A HAZARDOUS WASTE UNDER RCRA. IT MAY BE R

RETURNED TO SAFT FOR RECYCLING. BATTERY IS TCLP TOXIC. BATTERY AND ELECTROLYTE SOLUTION ARE CORROSIVE. IF NOT RECYCLED, MUST BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

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

Transport Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

SARA Title III Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

Federal Regulatory

Information:LECTROLYTE CERCLA RQ: 1000 LBS; 40 CFR

117.13. THE BATTERY IS A HAZARDOUS WASTE UNDER RCRA.

State Regulatory Information:NO DATA PROVIDED BY RESPONSIBLE PARTY.

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

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