

SAFT AMERICA INC -- NICKEL-METAL HYDRIDE SEALED CELL BATTERY -- 6140-01-413-6549

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

Product ID:NICKEL-METAL HYDRIDE SEALED CELL BATTERY

MSDS Date:04/11/1997

FSC:6140

NIIN:01-413-6549

Status Code:A

MSDS Number: CKTHT

=== Responsible Party ===

Company Name:SAFT AMERICA INC

Address:711 INDUSTRIAL BLVD

City:VALDOSTA

State:GA

ZIP:31601

Country:US

Info Phone Num:912-247-

2331

Emergency Phone Num:912-247-2331

Resp. Party Other MSDS Num.:P/N: 10012-0300

Chemtrec Ind/Phone:(800)424-9300

CAGE:UO040

=== Contractor Identification ===

Company Name:HARRIS CORP R F COMMUNICATIONS GROUP

Address:1680 UNIVERSITY AVE

Box:City:ROCHESTER

State:NY

ZIP:14610-1839

Country:US

Phone:716-244-5830

CAGE:14304

Company Name:SAFT AMERICA INC

Address:711 INDUSTRIAL BLVD

Box:City:VALDOSTA

State:GA

ZIP:31601

Country:US

Phone:912-247-2331

CAGE:UO040

===== Composition/Information on

Ingredients =====

Ingred Name:NICKEL  
CAS:7440-02-0  
RTECS #:QR5950000  
= Wt:39.  
OSHA PEL:1 MG/M3  
ACGIH TLV:1 MG/M3

Ingred Name:COBALT  
CAS:7440-48-4  
RTECS #:GF8750000  
= Wt:5.  
OSHA PEL:0.1 MG/M3  
ACGIH TLV:0.02 MG/M3

Ingred Name:MANGANESE  
CAS:7439-96-5  
RTECS #:OO9275000  
= Wt:1.5  
OSHA PEL:C5 MG/M3  
ACGIH TLV:5 MG/M3

Ingred Name:ALUMINUM  
CAS:7429-90-5  
RTECS #:BD0330000  
&lt; Wt:1.  
OSHA PEL:15 MG/M3  
ACGIH TLV:10 MG/M3

Ingred Name:KOH SOLUTION  
CAS:1310-58-3  
RTECS #:TT2100000  
= Wt:12.  
ACGIH S  
TEL:C2 MG/M3  
EPA Rpt Qty:1000 LBS  
DOT Rpt Qty:1000 LBS

Ingred Name:STEEL, LANTHANIDES, PLASTICS, ZINC  
= Wt:41.5

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

LD50 LC50 Mixture:NONE PROVIDED BY MFR.  
Health Hazards Acute and Chronic:EYE: IN THE CASE OF A FIRE OR CELL  
RUPTURE THE ELECTROLYTE SOLUTION INSIDE BATTERY IS EXTREMELY  
CORROSIVE TO EYE TISSUES. MAY RESULT IN PERMANENT BLINDNESS.  
CONTACT WITH NICKEL OXIDE MAY CAUSE MINOR I RRRITATION. SKIN:  
CONTACT W

ITH ELECTROLYTE SOLUTION INSIDE BATTERY MAY CAUSE SERIOUS BURNS TO SKIN TISSUE. CONTACT WITH NICKEL COMPOUNDS MAY CAUSE SKIN SENSITIZATION, RESULTING IN CHRONIC ECZEMA OR NICKEL RASH. INGESTION: INGESTION OF ELECTROLYTE SOLUTION CAUSES TISSUE DAMAGE TO THROAT AREA & GASTRO/RESPIRATORY TRACT. INGESTION OF NICKEL COMPOUND CAUSES NAUSEA & INTESTINAL DISORDERS. INHALATION: (S UPPL) Explanation of Carcinogenicity:NIOSH RECOMMENDS THAT NICKEL BE TREATED AS AN OCCUPATIONAL CARCINOGEN.

Effects of Overexposure:INGESTION: NAUSEA. INHALATION: INHALATION MAY CAUSE DRY THROAT, COUGH, HEADACHE, VOMITING, CHEST PAIN & CHILLS. Medical Cond Aggravated by Exposure:NONE PROVIDED BY MFR.

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

First Aid:BATTERY ELECTROLYTE:EYE: FLUSH WITH PLENTY OF WATER FOR AT LEAST 20 MINS IF ABUSE CAUSES SAFETY VENTS TO ACTIVATE. GET IMMEDIATE MEDICAL ATTENTION. SKIN: REMOVE CONTAMINATED CLOTHING & FLUSH AFFECTED

AREAS WITH PLENTY OF WATER FOR AT LEAST 20 MINS.

WASH WITH SOAP & WATER. 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 ATTENTION.

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

Extinguishing Media:CO2, SAND, DRY CHEMICAL (PURPLE K)

Fire Fighting Procedures:USE SELF CONTAINED BREATHING APPARATUS TO AVOID BREATHING TOXIC FUMES. WEAR PROTECTIVE CLOTHING & EQUIPMENT TO PREVENT POTENTIAL BODY CONTACT WITH ELECTROLYTE SOLUTION OR MIXTURE OF WATER & SOLUTION.

Unusual Fire/Explosion Hazard:ELECTROLYTE SOLUTION IS CORROSIVE TO ALL HUMAN TISSUES. IT WILL REACT VIOLENTLY WITH MANY ORGANIC CHEMICALS ESPECIALLY MILROCARBONS & CHLOROCARBONS. ELECTROLYTE SOLUTION REACTS WITH ZINC, ALUMINUM, TITANIUM, & OTHER ACTIVE MATERIALS, RELEASING FLAMMABLE HYDROGEN GAS.

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

Spill Release Procedures:ELECTROLYTE SPILLS: FLUSH WITH WATER & NEUTRALIZE WITH DILUTE CITRIC ACID

Neutralizing Agent:DILUTE CITRIC ACID

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

Handling and Storage Precautions:THESE CELLS & THE BATTERIES CONSTRUCTED FROM THEM MAY BE HIGHLY CHARGED & ARE CAPABLE OF HIGH ENERGY DISCHARGE. C

ARE 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 SHORT CIRCUIT - MAY CAUSE BURNS. DO NOT BREAK  
OPEN CELL. DO NOT INCINERATE OR ALLOW AN EXPOSED FLAME OR SPARK TO  
COME NEAR THE CELLS.

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

Respiratory Protection:USE NIOSH/MSHA APPROVED RESPIRATOR IF CELL  
BROKEN OPEN DURING A FIRE

TO MAINTAIN EXPOSURE LEVELS BELOW THE TWA  
FOR METAL-BASED COMPOUNDS

Ventilation:NONE PROVIDED BY MFR.

Protective Gloves:ANY WATER-INSOLUBLE NON-PERMEABLE GLOVE (SYNTHETIC  
RUBBER)

Eye Protection:SPLASH GOGGLES OR FACE SHIELD IF CELL ACTIVATES DUE TO  
ABUSE

Other Protective Equipment:RUBBER APRON OR EQUIVALENT IF EXPOSURE TO  
ELECTROLYTE SOLUTION IS LIKELY. DO NOT USE LEATHER OR WOOL

Work Hygienic Practices:NONE PROVIDED BY MFR.

Supplemental Safety and Health

FIRST AID CONT: INHALATION

: NO EXPOSURE POSSIBLE EXCEPT IN THE CASE OF

FIRE OR ABUSE. EFFECTS OF INHALATION OF METALLIC COMPOUNDS VARY  
FROM MILD IRRITATION OF NASAL MUCOUS MEMBRANES TO DAMAGE OF LUNG  
TISSUES PROPER. SAFT PART NUMBER/TRADE NAME: 10012-0300/BATTERY  
STORAGE.

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

HCC:Z7

Decomp Temp:Decomp Text:NONE PROVIDED BY MFR.

Spec Gravity:1.170-1.250(ELECTROLYTE)

pH:NONE PROVIDED

Viscosity:NONE PROVIDED BY MFR.

Evaporation Rate &

Reference:NOT DETERMINED

Solubility in Water:ELECTROLYTE IS SOLUBLE

Appearance and Odor:NONE PROVIDED BY MFR.

Percent Volatiles by Volume:NONE PROVIDED

Corrosion Rate:NONE PROVIDED BY MFR

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

ELECTROLYTE WILL ATTACK, CORRODE, OR REACT WITH ALUMINUM, ZINC, TIN,  
AND OTHER ACTIVE METALS, ACID, CHLORINATED & AROMATIC HYDROCARBONS,  
NITROCARBONS, HALOCARBONS.

Stability Condition to Avoid:NONE PROVIDED BY MFR.

Hazardous Decomposit

ion Products:NICKEL OXIDE, OTHER METAL OXIDES,  
POTASSIUM HYDROXIDE

Conditions to Avoid Polymerization:WILL NOT OCCUR

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

Waste Disposal Methods:THE STORAGE BATTERY IS NOT A HAZARDOUS WASTE UNDER RCRA. IT MAY BE RETURNED TO SAFT FOR RECYCLING. BATTERY IS NOT TCLP TOXIC. IF NOT RECYCLED, MUST BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE & LOCAL REGULATIONS.

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 professional advice to verify and assume responsibility for the suitability of this information to their particular situation.