Product ID:NICKEL-CADMIUM SEALED CELL BATTERY MSDS Date:02/28/1991 FSC:6140 NIIN:01-072-3124 MSDS Number: BPZJQ === Responsible Party === Company Name:SAFT AMERICA, INC Address:711 INDUSTRIAL BLVD City:VALDOSTA State:GA ZIP:31602 Country:US Info Phone Num:912-247-2331 **Emergency Phone Num** :912-247-2331 CAGE:KO178 === Contractor Identification === Company Name:SAFT AMERICA Box:1886 Country:US CAGE:6M493 Company Name:SAFT AMERICA, INC. Address:711 INDUSTRIAL BLVD Box:1886 City:VALDOSTA State:GA ZIP:31603 Country:US Phone:912-247-2331 CAGE:KO178

Ingred Name:CADMIUM (SARA III).OSHA PEL 0.2 MG/M3 FOR DUST.ACGIH TLV ON INTENDED CHANGE LIST.TOTAL % OF INGREDIENDS 1,2 &3 IS 8-20. CAS:7440-43-9 RTECS #:EU9800000 O

ther REC Limits:NONE RECOMMENDED OSHA PEL:SEE 1910.1027 ACGIH TLV:0.01 MG/M3 DUST;9394 EPA Rpt Qty:10 LBS DOT Rpt Qty:10 LBS Ingred Name: CADMIUM HYDROXIDE. OSHA PEL 0.2 MG/M3 FOR DUST. ACGIH TLV FOR RESP FRACTION, INTENDED CHANGE LIST. TOTAL % 1,2 & 3 IS 8-20. CAS:21041-95-2 Other REC Limits:NONE RECOMMENDED OSHA PEL:0.1 MG(CD)/M3,FUME ACGIH TLV:0.002 MG(CD)/M3 Ingred Name: CADMIUM OXIDE (SARA III). OSHA PEL 0.2 MG/M3 FOR DUST. ACGIH TLV FOR RESP FRACTION, INTENDED CHANGE, TOTAL 1,2 & 3 IS 8-2 0. CAS:1306-19-0 RTECS #:EV1925000 Other REC Limits:NONE RECOMMENDED OSHA PEL:SEE 1910.1027 ACGIH TLV:0.05 MG(CD)/M3; 9293 Ingred Name:NICKEL (SARA III).TOTAL % OF 4,5 & 6 IS 15-35%. CAS:7440-02-0 RTECS #:QR5950000 Other REC Limits:NONE RECOMMENDED OSHA PEL:1 MG/M3 ACGIH TLV:0.05 MG/M3, INT CHG Ingred Name:NICKEL HYDROXIDE (SARA III).OSHA PEL FOR INSOL NI CMPD.ACGIH TLV ON INTENDED CHANGE LIST.TOTAL % OF 4,5 & 6 IS 15-35. CAS:12054-48-7 RTECS #:QR7040000 Other REC Limits:NONE RECOMMENDED OSHA PEL:1 MG NI/M3 ACGIH TLV:0.1 MG NI/M3; 9293 EPA Rpt Qty:10 LBS DOT Rpt Qty:10 LBS Ingred Name:NICKEL OXIDE. OSHA PEL FOR INSOL NICKEL CMPD.ACGIH TLV ON INTENDED CHANGE LIST.TOTAL % OF 4,5 & 6 IS 15-35. Other REC Limits:NONE RECOMMENDED

OSHA PEL:1.0 MG(NI)/M3 ACGIH TLV:0.05 MG(NI)/M3

LD50 LC50 Mixture:NOT KNOWN Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO Reports of Carcinogenicity:NTP:YES IARC:YES OSH

A:NO
Health Hazards Acute and Chronic:INTACT BATTERIES PRESENT NO SPECIFIC HAZARDS.BURNING BATTERIES MAY EMIT TOXIC FUMES.NICKEL MAY CAUSE LOCAL DERMATITIS.
Explanation of Carcinogenicity:CD & CMPD:LTD EVID FOR CARCIN IN HUMANS,SUFF IN ANIMALS (IARC 1987);SUSP HUMAN,KNOWN ANIMAL CARCIN (NTP 1991);(SUP DATA)
Effects of Overexposure: EXPOSURE TO CADMIUM DUST OR FUME MAY CAUSE IRRITATION OF NOSE & THROAT, SWEATING, CHILLS, SHORTNESS OF BREATH, WEAKNESS, NAUSEA, COUGHING, CHEST PAIN
S. Medical Cond Aggravated by Exposure:RESPIRATORY SYSTEM,PROSTATE,LIVER AND KIDNEY DISORDERS.
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First Aid:BATTERY CONTENTS IN CONTACT WITH EYES/SKIN: FLUSH WITH WATER FOR 15 MINUTES.SEE PHYSICIAN IF SYMPTOMS DEVELOP. INGESTION:INDUCE VOMITING IF CONSCIOUS.SEE PHYSICIAN. INHALATION:REMOVE FROM EXPOSURE.SEE PHYSICIAN.
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Flash Point:NOT KNOWN Lo wer Limits:NOT KNOWN Upper Limits:NOT KNOWN Extinguishing Media:USE WATER,CARBON DIOXIDE OR DRY CHEMICAL. Fire Fighting Procedures:USE NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING IF INVOLVED IN A FIRE.
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Spill Release Procedures:CONTAIN THE SPILL.COLLECT THE SPILLED MATERIAL AND PLACE IT IN A PLASTIC-LINED CONTAINER.HEPA VACUUMING IS PREFERRED.FLUSH SPILL AREA WITH WATER. N
eutralizing Agent:NOT KNOWN
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Handling and Storage Precautions:GENERAL STORAGE PROCEDURES FOR HAZARDOUS MATERIALS ARE ACCEPTABLE.KEEP CONTAINER CLOSED. Other Precautions:KEEP FOOD AND TOBACCO AWAY FROM WORK AREA.AVOID CONTACT WITH CLOTHING.AVOID GENERATING DUST.
========= Exposure Controls/Personal Protection ====================================
Respiratory Protection:WEAR NIOSH/MSHA APPROVED DUST MASKS OR RESPIRATORS. Ventilation:

LOCAL EXHAUST & MECHANICAL (GENERAL).

Protective Gloves: IMPERVIOUS GLOVES

Eye Protection:SAFETY GLASSESS OR GOGGLES.

Other Protective Equipment:WEAR COVERALLS.

Work Hygienic Practices: DO NOT WEAR CONTAMINATED CLOTHING HOME. SHOWER AND CHANGE.

Supplemental Safety and Health

EXPLAN OF CARCIN:ACGIH:A2=SUSP HUMAN CARCIN (1992-93);CHEMICALS KNOWN TO CAUSE CANCER (PROP CAL 1987).NI/CMPD:SUFF EVID FOR CARCIN IN HUMANS AND ANIMALS (IARC 1987);SUSPECTED HUMAN,KNOWN ANIMAL CARCIN OGEN (NTP

1991);ACGIH:A1=CONFIRMED HUMAN CARCIN (1992-93);CHEMICALS KNOWN TO CAUSE CANCER (PROP CAL 1987).

HCC:Z5 Boiling Pt:B.P. Text:NOT KNOWN Melt/Freeze Pt:M.P/F.P Text:NOT KNOWN Decomp Temp:Decomp Text:NOT KNOWN Vapor Pres:NOT KNOWN Vapor Density:NOT KNOWN Spec Gravity:1.6 (WATER=1) Evaporation Rate & amp; Reference:NOT KNOWN Solubility in Water:NOT KNOWN Appearance and Odor:NOT KNOWN

======= Stability and Reactivit

Stability Indicator/Materials to Avoid:YES NOT KNOWN Stability Condition to Avoid:NOT KNOWN Hazardous Decomposition Products:MAY EVOLVE METAL OXIDE FUMES AT TEMPERATURES ABOVE MELTING POINT. Conditions to Avoid Polymerization:WILL NOT OCCUR.

Waste Disposal Methods:DISPOSAL MUST BE IAW FEDERAL,STATE,AND LOCAL REGULATIONS.COORDINATE WITH SUPPORTING INSTALLATION AND/OR MACOM ENVIRONMENTAL OF

FICE PRIOR TO DISPOSAL .IF DISCARDED, TREAT AS HAZARDOUS WASTE.

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