

SANYO ENERGY USA CORP -- NICKEL CADMIUM BATTERY TYPE NO: CADNICA -- 6140-01-381-1058

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

Product ID:NICKEL CADMIUM BATTERY TYPE NO: CADNICA

MSDS Date:12/09/1999

FSC:6140

NIIN:01-381-1058

Status Code:A

MSDS Number: CKDRB

=== Responsible Party ===

Company Name:SANYO ENERGY USA CORP

Address:2001 SANYO AVE

City:SAN DIEGO

State:CA

ZIP:92173

Country:US

Info Phone Num:619-6

81-6620

Emergency Phone Num:619-661-6620

CAGE:00JU0

=== Contractor Identification ===

Company Name:BLACK AND DECKER, US, INC

Address:HWY 301 S

Box:64429

City:FAYETTEVILLE

State:NC

ZIP:28306

Country:US

Phone:919-423-3100

CAGE:58243

Company Name:KAMPI COMPONENTS CO., INC.

Address:210 RT 13

Box:721

City:BRISTOL

State:PA

ZIP:19007-3517

Country:US

Phone:215-736-2000

Contract Num:SP0430-98-M-JP70

CAGE:7Z016

Company Name:SANYO ENERGY(U.S.A.) CORP.

Address:2001 SANYO AVE

Box:City:SAN DIEGO

State:CA

ZIP

:92173
Country:US
Phone:619-661-6620
CAGE:00JU0

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===== Composition/Information on Ingredients =====
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Ingred Name:CADMIUM
CAS:7440-43-9
RTECS #:EU9800000
Minumum % Wt:11.
Maxumum % Wt:26.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:0.005 MG/M3 TWA
ACGIH TLV:0.05 MG/M3 TWA
EPA Rpt Qty:10 LBS
DOT Rpt Qty:10 LBS

Ingred Name:CADMIUM HYDROXIDE
CAS:21041-95-2
RTECS #:EV1260000
Minumum % Wt:11.
Maxumum % Wt:26.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:0.005 MG/M3 TWA
ACGIH TLV:0.05 M
G/M3 TWA

Ingred Name:NICKEL (POWDER)
CAS:7440-02-0
RTECS #:QR5950000
Minumum % Wt:8.
Maxumum % Wt:17.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3

Ingred Name:NICKEL HYDROXIDE
CAS:12054-48-7
RTECS #:QR7040000
Minumum % Wt:5.
Maxumum % Wt:12.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3
EPA Rpt Qty:10 LBS
DOT Rpt Qty:10 LBS

Ingred Name:POTASSIUM HYDROXIDE
CAS:1310-58-3
RTECS #:TT2100000
< Wt:3.
Other REC Limits:NONE RECOMMENDED
OSHA PEL:2 MG/M

3 CEILING
ACGIH TLV:2 MG/M3 CEILING
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

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

Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: BATTERY IS HERMETICALLY SEALED.
SHOULD BATTERIES BE EXPOSED TO EXTREME HEAT/PRESSURE CAUSING A
BREACH IN CASE, DUSTS AND FUMES INHALATION MAY CAUSE IRRITATION OF
RESPIRATORY TRACT, EXTREME RE
ST LESSNESS, PNEUMONITIS. IN CASE OF
HIGH CONCENTRATION EXPOSURES, DEATH MAY OCCUR WITHIN SEVERAL DAYS
AFTER EXPOSURE. ELECTROLYTE CAN CAUSE SEVERE EYE AND SKIN
IRRITATION, CHEMICAL BURNS. NICKEL MAY CAUSE DERMATITIS. INGESTION
MAY CAUSE LOCALIZED BURNS. CHRONIC - LUNG CANCER, LIVER AND KIDNEY
DISFUNCTION, SKELETAL DISEASE, REPRODUCTIVE TOXICITY, DERMATITIS.
Explanation of Carcinogenicity:HAZARDOUS MATERIAL CONTAINED IN SEALED
CASE. BATTERY NOT HAZARDOUS. IF CASE IS BR
EACHED, EXPOSURE TO
CADMIUM AND NICKEL IS POSSIBLE.THESE HAVE BEEN IDENTIFIED BY NTP AS
ANTICIPATED CARCINOGENS. U.S. EPA CLASSIFIED CADMIUM AS "B1"
PROBABLE HUMAN CANCINOGEN. IARC LISTS CADMIUM "2A" PROBABLE HUMAN
CARCINOGEN. ACGIH PROPOSED LISTING CADMIUM AS "A2" CARCINOGEN.
Effects of Overexposure:INTACT BATTERY NO SIGNS AND SYMPTOMS OF OVER
EXPOSURE. FOR BREACHED BATTERY CASES AND EXPOSURE TO BATTERY
INGREDIENTS: PAIN, NAUSEA, VOMITING, DIARRHEA, SEVERE IRRITATION,

CHEMICAL BURNS, RESTLESSNESS, IRRITABILITY, CHOKING, SALIVATION,
ANEMIA.
Medical Cond Aggravated by Exposure:A KNOWLEDGE OF AVAILABLE TOXICOLOGY
INFORMATION AND PHYSICAL AND CHEMICAL PROPERTIES OF BATTERY
INGREDIENTS SUGGESTS THAT OVEREXPOSURE IS UNLIKELY TO AGGRAVATE
EXISTING MEDICAL CONDITIONS.

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

First Aid:INHALATION: IF POTENTIAL FOR EXPOSURE TO CADMIUM OR NICKEL
FUMES OR DUSTS OCCURS (BREACHED BAT

ATTERY CASE) REMOVE TO FRESH AIR

IMMEDIATELY AND SEEK MEDICAL ATTENTION. EYES: IF CONTENTS FROM AN OPENED BATTERY COMES INTO CONTACT WITH EYES, IMMEDIATELY FLUSH EYES THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION. SKIN: IF INTERNAL CELL MATERIALS OF AN OPENED BATTERY COMES INTO CONTACT WITH SKIN, IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. SWALLOWING: DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

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Fire Fighting Measures =====

Extinguishing Media: ANY CLASS OF EXTINGUISHING MEDIUM MAY BE USED ON THE BATTERIES OR THEIR PACKING MATERIAL.

Fire Fighting Procedures: EXPOSURE TO TEMPERATURES OF ABOVE 212F CAN CAUSE EVAPORATION OF THE LIQUID CONTENT OF THE POTASSIUM HYDROXIDE ELECTROLYTE RESULTING IN THE RUPTURE OF THE CELLS. POTENTIAL FOR EXPOSURE TO CADMIUM FUMES DURING FIRE; USE SELF-CONTAINED BREATHING APPARATUS.

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Accidental Release Measures =
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Spill Release Procedures: SPILL AND LEAKS ARE UNLIKELY BECAUSE CELLS ARE CONTAINED IN AN HERMETICALLY SEALED CASE. IF BATTERY CASE IS BREACHED, WEAR PROTECTIVE CLOTHING THAT IS IMPERVIOUS TO CAUSTIC MATERIALS AND ABSORB OR PACK SPILL RESIDUES IN INERT MATERIALS. PLACE IN AN APPROPRIATE CONTAINER FOR DISPOSAL.

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Handling and Storage =====

Handling and Storage Precautions: STORE IN COOL (~31F TO 95F) PLACE, BUT PREVENT

CONDENSATION ON CELL OR BATTERY TERMINALS. AVOID BREAKING, CRUSHING OR OTHERWISE DESTROYING THE PHYSICAL INTEGRITY OF THE CELL OR BATTERY. ELEVATED TEMPERATURES CAN RESULT IN SHORTENED BATTERY LIFE. DO NOT OBSTRUCT SAFETY RELEASE VENTS ON BATTERIES.

Other Precautions: CHARGING: THIS BATTERY IS DESIGNED FOR RECHARGING. A LOSS OF VOLTAGE AND CAPACITY OF BATTERIES DUE TO SELF-DISCHARGE DURING PROLONGED STORAGE IS UNAVOIDABLE. CHARGE BATTERY BEFORE USE. OBSERVE THE SPE

CIFIED CHARGE RATE.

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

Respiratory Protection:NOT REQUIRED UNDER NORMAL USE.

Ventilation:NOT REQUIRED UNDER NORMAL USE.

Protective Gloves:NOT REQUIRED UNDER NORMAL USE.

Eye Protection:NOT REQUIRED UNDER NORMAL USE.

Supplemental Safety and Health

P/N: BKB191205/2. PRODUCT IS A MANUFACTURED ARTICLE AS DESCRIBED IN 29

CFR 1910.1200. THE BATTERY CELL IS CONTAINED IN A

HERMETICALLY-SEALED CASE, DESIGNED TO WITHSTAND TEMPERATUR

ES AND

PRESSURES ENCO UNTERED DURING NORMAL USE. AS A RESULT, DURING

NORMAL USE, HAZARDOUS MATERIALS ARE FULLY CONTAINED INSIDE BATTERY

CELL.

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

HCC:Z5

Spec Gravity:8.65 CADMIUM

Solubility in Water:SOLUBLE (POTASSIUM HYDRO)

Appearance and Odor:SEALED BATTERY

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

Stability Indicator/Materials to Avoid:YES

THE BATTERY CELLS ARE ENCASED IN A NON-REACTIVE

CONTAINER; HOWEVER, IF

THE CONTAINER IS BREACHED, AVOID CONTACT OF INTERNAL BATTERY

COMPONENTS WITH ACIDS, ALDEHYDES, AND CARBAMATE COMPOUNDS.

Stability Condition to Avoid:HEAT, OPEN FLAMES, SPARKS, AND MOSITURE.

Hazardous Decomposition Products:OXIDES OF CADMIUM AND NICKEL

Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

Waste Disposal Methods:RETURN TO SANYO ENERGY CORP. FOR RECYCLE.

CONTACT YOUR SANYO REPRES

NTATIVE FOR MORE INFORMATION ON THE EARTH

SAVER 2001 RECYCLING PROGRAM. BATTERIES MUST BE HANDLED IN

ACCORDANCE WITH APPLICABLE LOCA L, STATE, AND FEDERAL LAWS AND

REGULATIONS. DO NOT INCINERATE OR SUBJECT BATTERY CELLS TO

TEMPERATUR ES IN EXCESS OF 212F.

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

Transport Information:A NON-SPILLABLE WET ELECTRIC STORAGE BATTERY IS

EXCEPTED FROM ALL OTHER REQUIREMENTS OF THIS SUBCHAPTER IF: (1).

THE BATTERY I

S PROTECTED AGAINST SHORT CIRCUIT; (2). FOR BATTERIES
MANUFACTURED AFTER SEPTEMBER 30,1995, THE BATTERY AND THE OUTER
PACKAGING MUST BE PLAINLY AND DURABLY MARKED "NONSPILLABLE" OR:
"NONSPILLABLE BATTERY", AND (3). THE BATTERY MUST BE CAPABLE OF
WITHSTANDING THE FOLLOWING TWO TESTS WITHOUT LEAKAGE OF BATTERY
FLUID FROM THE BATTERY: (1) VIBRATION TEST; (2I) PRESSURE
DIFFERENTIAL TEST. SEE 49 CFR 173.159(D).

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