

SANYO ENERGY CORP, BATTERY DIV -- MANGANESE DIOXIDE LITHIUM PRIMARY BATTERIES --
6135-01-205-5965

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

Product ID:MANGANESE DIOXIDE LITHIUM PRIMARY BATTERIES

MSDS Date:05/10/1994

FSC:6135

NIIN:01-205-5965

MSDS Number: BKYVF

=== Responsible Party ===

Company Name:SANYO ENERGY CORP, BATTERY DIV

Address:200 RISER RD

City:LITTLE FERRY

State:NJ

ZIP:07643

Country:US

Info P

Phone Num:201-641-2333

Emergency Phone Num:619-661-6620

CAGE:0C8Z7

=== Contractor Identification ===

Company Name:SANYO ENERGY CORP, BATTERY DIV

Address:200 RISER RD

Box:City:LITTLE FERRY

State:NJ

ZIP:07643

Country:US

Phone:201-641-2333

CAGE:0C8Z7

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

Ingred Name:MANGANESE DIOXIDE

CAS:1313-13-9

RTECS #:OP0350000

Other REC Limits:NONE RECOMME

OSHA PEL:5 MG MN/M3 CEILING

ACGIH TLV:5 MG MN/M3

Ingred Name:LITHIUM METAL

CAS:7439-93-2

RTECS #:OJ5540000
Other REC Limits:NONE RECOMME

Ingred Name:1,3-DIOXALAN-2-ONE (ETHYLENE CARBONATE)
CAS:96-49-1
RTECS #:FF9550000
Other REC Limits:NONE RECOMME

Ingred Name:DIMETHOXYETHANE
CAS:110-71-4
RTECS #:K11451000
Other REC Limits:NONE RECOMME

Ingred Name:4-ETHYL-1,3-DIOXOLAN-2-ONE (BUTYLENE CARBONATE)
CAS:4437-85-8
RTECS #:J14582000
Other REC Limits:NONE RECOMMENDED

Ingred Name:LITHIUM TRIFLUORO METHANE SULFONATE
Other REC Limits:NONE RECOMMENDED

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Hazards Identification

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:CHEMICALS ARE IN A SEALED CAN.
EXPOSURE OCCURS WHEN BATTERY HAS BEEN ABUSED. DME IS SLIGHTLY TO
MODERATELY TOXIC. EC & BC ARE IRRITATING TO EYES. LICF3SO3 IS
IRRITATING TO SKIN, EYES & MUCOUS MEMBRAN ES. CONTACT OF
ELECTROLYTE & EXTRUDED LITHIUM W/SKIN & EYES SHOULD BE AVOIDED.

Explanation of Carcinogenicity:MFR GAVE THE ABOVE LISTINGS ON THE MSDS
BUT NO OTHER COMMENTS WERE RECORDED.
Effects of Overexposure:DMD MAY BE A REPRODUCTIVE HAZARD. LITHIUM CAN
CAUSE THERMAL & CHEMICAL BURNS ON CONTACT W/SKIN.
Medical Cond Aggravated by Exposure:AN ACUTE EXPOSURE WILL GENERALLY
NOT AGGRAVATE ANY MEDICAL CONDITION.

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First Aid Measures

First Aid:FOR CONTACT OF BATTERY INTERNALS WITH-SKIN:FLUSH IMMEDIATELY
W/WATER. -EYES:FLUSH WITH COPIOUS AMO

UNTS OF WATER FOR 15 MINUTES.

IF IRRITATION PERSISTS, GET MEDICAL ATTENTION. DO NOT INHALE VENTED
MATE RIAL.

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

Flash Point:NONE

Extinguishing Media:WATER

Fire Fighting Procedures:IN CASE OF FIRE IN AN ADJACENT AREA, USE
WATER, CO2 OR SRY CHEMICAL EXTINGUISHERS IF CELL ARE PACKED IN
THEIR ORIGIONAL CONTAINERS SINCE THE FUEL IS PAPER.

Unusual Fire/Explosion Hazard:FOR BULK QUANTITIES OF UNPACKAGED CELL US
LITH

-X (GRAPHITE BASE). IN THIS CASE USE NO WATER.

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

Spill Release Procedures:THE PREFERRED RESPONSE IS TO LEAVE AREA AND
ALLOW BATTERIES TO COOL AND VAPORS TO DISSIPATE. AVOID SKIN & EYE
CONTACT OR INHALATION OF VAPORS. REMOVE SPILLED LIQUID W/ABSORBENT
& INCINERATE.

Neutralizing Agent:MFR GAVE NO INFORMATION ON MSDS.

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

Handling and Storage Precautions:

AVOID MECHANICAL OR ELECTRICAL ABUSE.

Other Precautions:BATTERIES MAY EXPLODE OR CAUSE BURN. IF DISASSEMBLED,
CRUSHED, RECHARGED OR EXPOSED TO FIRE OR HIGH TEMPERATURE. DO NOT
SHORT NOR INSTALL W/INCORRECT POLARITY.

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

Respiratory Protection:NOT NESCESSARY UNDER CONDITIONS OF NORMAL USE.

Ventilation:NOT NESCESSARY UNDER CONDITIONS OF NORMAL USE.

Protective Gloves:NOT NESCESSARY UNDER CONDITIONS OF NORMA

Eye Protection:NOT

NESCESSARY UNDER CONDITIONS OF NORMA

Other Protective Equipment:NOT NESCESSARY UNDER CONDITIONS OF NORMAL
USE.

Work Hygienic Practices:MFR:? HMIS:USE GOOD INDUSTRIAL HYGIENE

PRACTICE. IF HANDLING LEAKING BATTERIES USE STRICT CHEMICAL HYGIENE
PRACTICE.

Supplemental Safety and Health

AVOID ALL CONTACT W/BATTERY INTERNALS. WASH THOROUGHLY AFTER HANDLING.

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

HCC:F8

NRC/State Lic Num:NONE

pH:UNKNON

Appearance and Odor:S

EALED NON-RECHAGABLE BATTERY.

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

Stability Indicator/Materials to Avoid: YES

MFR GAVE NO INFORMATION ON MSDS.

Stability Condition to Avoid: DO NOT HEAT, DIASSEMBLE OR RECHARGE.

Conditions to Avoid Polymerization: WILL NOT OCCUR.

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

Waste Disposal Methods: DISPOSE OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS. OPEN CELLS SHOULD BE TREATED AS HAZARDOUS WASTE.

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