

RACAL HEALTH AND SAFETY INC -- HIGH RATE LITHIUM MANGANESE DIOXIDE
CELL/BATTERIES,520-03-94 -- 6135-01-426-8282

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

Product ID:HIGH RATE LITHIUM MANGANESE DIOXIDE CELL/BATTERIES,520-03-94

MSDS Date:02/07/1995

FSC:6135

NIIN:01-426-8282

MSDS Number: CBRFS

=== Responsible Party ===

Company Name:RACAL HEALTH AND SAFETY INC

Address:7305 EXECUTIVE WAY

City:FREDERICK

State

:MD

ZIP:21704-8368

Country:US

Info Phone Num:301-695-8200

Emergency Phone Num:301-695-8200/800-682-9500

CAGE:41863

=== Contractor Identification ===

Company Name:RACAL HEALTH AND SAFETY INC

Address:7305 EXECUTIVE WAY

Box:City:FREDERICK

State:MD

ZIP:21701

Country:US

Phone:301-695-8200

CAGE:41863

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

Ingred Name:LITHIUM METAL

CAS:7439-93-2

RTECS #:OJ5540000

Other REC Limits:NONE RECOMMENDED

Ingred Name:MANGANESE DIOXIDE

CAS:1313-1

3-9
RTECS #:OP0350000
Other REC Limits:NONE RECOMMENDED
OSHA PEL:5 MG MN/M3 CEILING
ACGIH TLV:5 MG MN/M3

Ingred Name:PROPYLENE CARBONATE
CAS:108-32-7
RTECS #:FF9650000
Other REC Limits:NONE RECOMMENDED

Ingred Name:DIMETHOXYETHANE (1,2)
CAS:110-71-4
RTECS #:K11451000
Other REC Limits:NONE RECOMMENDED

Ingred Name:TETRAHYDROFURAN (CERCLA)
CAS:109-99-9
RTECS #:LU5950000
Other REC Limits:NONE RECOMMENDED
OSHA PEL:200 PPM
ACGIH TLV:200 PPM/250STEL;9596
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:LITHIUM PERCHLORATE
CAS:7791-03-9
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:NOT RELEVANT
Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:RISK OF EXPOSURE OCCURS ONLY IF CELL IS MECHANICALLY, PHYSICALLY/ELECTRICALLY ABUSED. TARGET ORGANS:EYE, SKIN, LUNG. ACUTE- CONTACT WITH AN OPEN BATTERY WOULD BE HARMFUL.

CORROSIVE. HARMFUL IF INGESTED/INHALED/ABSORBED THROUGH SKIN. MAY CAUSE CNS EFFECTS. FUMES MAY IRRITATE EYES, SKIN & RESPIRATORY TRACT. CHRONIC- UNK.

Explanation of Carcinogenicity:NONE
Effects of Overexposure:RISK OF EXPOSURE OCCURS ONLY IF CELL IS MECHANICALLY, PHYSICALLY OR ELECTRICALLY ABUSED. IF CELL IS LEAKING/IN FIRE: SEVERE IRRITATION, TEARING, DIZZINESS, HEADACHE, NAUSEA
Medical Cond Aggravated by Exposure:NONE KNOWN

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

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First Aid:GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:REMOVE TO FRESH AIR. CALL PHYSICIAN. EYES:FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SEE PHYSICIAN. SKIN:WASH WITH SOAP & WATER. ORAL:IF BATTERY/ OPEN BATTERY IS INGESTED, DO NOT INDUCEVOMITING OR GIVE FOOD/DRINK. SEEK IMMEDIATE MEDICAL ATTENTION. CALL NATIONAL BATTERY INGESTION HOTLINE FOR ADVICE & FOLLOWUP (202-625-3333).

===== Fire Fighting Measures =====
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Flash Point:NOT RELEVANT

Extinguishing Media:USE A DRY POWDER EXTINGUISHER BASED ON GRAPHITE (LITH-X) OR OTHER SUITABLE EXTINGUISHERS DESIGNED FOR ALKALI METAL FIRES

Fire Fighting Procedures:WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS OPERATED IN THE POSITIVE PRESSURE MODE.

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

Spill Release Procedures:IF CELL IS PUNCTURED, VENTILATE AREA WELL. WEAR EYE AND SKIN PROTECTIO

N. RESPIRATORY PROTECTION MAY BE NECESSARY IN CONFINED SPACES. ABSORB LIQUID WITH SUITABLE MATERIAL SUCH AS SAND OR CLAY. TRANSFER TO CONTAINER FOR LATER DISPOSAL.

Neutralizing Agent:NOT RELEVANT

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

Handling and Storage Precautions:STORE IN ORIGINAL CONTAINERS. AVOID TEMPERATURES ABOVE 77F. NEVER CUT INTO CELL. DO NOT USE IN AIRTIGHT CONTAINERS.

Other Precautions:DO NOT INCINERATE. DO NOT TOUCH BROKEN OR LEAKING BATTERIES. AVOID MECHANICAL OR ELECTRICAL ABUSE. DO NOT ATTEMPT TO RECHARGE. AVOID SHORT CIRCUITS. DO NOT CARRY BATTERIES LOOSE IN POCKET OR BAG. KEEP BATTERIES AWAY FROM SMALL CHILDREN.

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

Respiratory Protection:USE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS WHEN CELLS ARE INVOLVED IN A FIRE OR LEAKING IN CONFINED SPACES.

Ventilation:ADEQUATE

Protective Gloves:NEOPRENE, RUBBER IF HANDLING LEAKERS

Eye

Protection:SAFETY GLASSES WHEN HANDLING LEAKERS
Other Protective Equipment:EYE WASH STATION, QUICK DRENCH SHOWER
Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND
RECOMMENDED PROCEDURES.
Supplemental Safety and Health

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

HCC:F8
NRC/State Lic Num:NOT RELEVANT
Spec Gravity:NOT RELEVANT
Viscosity:NOT RELEVANT
Evaporation Rate & Reference:NOT RELEVANT
Solubility in Water:NOT RELEVANT
Appearance and Odor:SEA
LED BATTERY

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

Stability Indicator/Materials to Avoid:YES
Stability Condition to Avoid:EXCESSIVE HEAT, SHORT CIRCUIT, CHARGE OR
REVERSE CHARGE
Hazardous Decomposition Products:MAY FORM LITHIUM OXIDE, MANGANESE
DIOXIDE, CARBON MONOXIDE, CARBON DIOXIDE.

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

Waste Disposal Methods:DISCHARGED CELLS MAY CONTAIN SIGNIFICANT AMOUNT
OF ENERGY AND SHOULD BE HAND
LED WITH CARE. THEY SHOULD BE
ELECTRICALLY ISOLATED AND PACKED FOR DISPOSAL. DO NOT COMPACT.
DISPOSE OF IN SANITARY LANDFILL IN ACCORDANCE WITH LOCAL, STATE
AND FEDERAL LAWS.

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