

RACAL COMMUNICATIONS INC -- BATTERY,NONRECHARGEABLE, SS-1600351-1  
6135-01-383-0151

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

Product ID:BATTERY,NONRECHARGEABLE, SS-1600351-1

MSDS Date:10/28/1994

FSC:6135

NIIN:01-383-0151

MSDS Number: BXWGT

=== Responsible Party ===

Company Name:RACAL COMMUNICATIONS INC

Address:5 RESEARCH PL

City:ROCKVILLE

State:MD

ZIP:20850-3213

Country:US

Info Phone Num:301-948-4420

Emergency Phone Num:301-948-4420

CAGE:23386

=== Contractor Identification ===

Company Name:BREN-TRONICS INC

Address:10 BRAYTON CT

Box:City:COMMACK

State:NY

ZIP:11725-3104

Country:US

Phone:631-499-5155

CAGE:51828

Company Name:RACAL COMMUNICATIONS INC

Address:5 RESEARCH PL

Box:City:ROCKVILLE

State:MD

ZIP:20850-3213

Country:US

Phone:301-948-4420

CAGE:23386

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

Ingred Name:LITHIUM

CAS:7439-93-2

RTECS #:OJ5540000

Fraction by Wt: 0.5%

Other REC Limits:NONE RECOMMENDED

Ingred Name:MANGANESE DIOXIDE

CAS:1313-13-9

RTECS #:OP0350000

Fraction by Wt: 5.6%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:5 MG MN/M3 CEILING

ACGIH TLV:5 MG MN/M3

Ingred Name:CARBON BLACK

CAS:1333-86-4

RTECS #:FF5800000

Fraction by Wt: 0.04%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:3.5 MG/M3

ACGIH TLV:3.5 MG/M3; 9495

Ingred Name:GRAPHITE (TYPE NOT SPECIFIED)

Fraction by Wt: 0%

Other REC Limits:NONE RECOMMENDED

Ingred Name:TEFLON

Fraction by Wt: 0.2%

Ot

her REC Limits:NONE RECOMMENDED

Ingred Name:PROPYLENE CARBONATE (PC)

CAS:108-32-7

RTECS #:FF9650000

Fraction by Wt: 0.25%

Other REC Limits:NONE RECOMMENDED

Ingred Name:ETHYLENE CARBONATE (EC)

Fraction by Wt: 0.25%

Other REC Limits:NONE RECOMMENDED

Ingred Name:DIMETHOXY ETHER (DME)

Fraction by Wt: 1.2%

Other REC Limits:NONE RECOMMENDED

Ingred Name:LITHIUM TRIFLUOROMETHANE SULFONATE (LITFS)

CAS:33454-82-9

Fraction by Wt: 0.1%

Other REC Limits:NONE RECOMMENDED

===== Hazards Id

entification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Explanation of Carcinogenicity:PER  
MSDS:CARCINOGENICITY:NTP/IARC/OSHA:NO.  
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:LIQUID ACETONITRILE: IN CASE OF CONTACT W/LIQUID OR VAOR  
FLUSH W/WATER AND SEEK MED ATTN. TREAT AS FOR ACUTE CYANIDE  
EX  
POSURE. SULFER DIOXIDE GAS IN SMALL QUANTITIES IS NOT LIFE  
THREATENING. ARE EXPOS ED SHOULD BE EVACUATED AND VENTILATED TO  
REMOVE SO2.

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

Flash Point Method:CC  
Flash Point:SUPPLEMENT  
Lower Limits:2.3 PC  
Upper Limits:2.3 PC  
Extinguishing Media:WATER.  
Fire Fighting Procedures:THE PREFERRED PROCEDURE IS TO RAPIDLY COOL  
BATTERIES AND ADJACENT STRUCTURES WITH WATER.  
Unusual Fire/Explosion Hazard:CELLS CAN VENT WHEN SUBJEC  
TED TO  
EXCESSIVE HEAT. WHEN LARGE NUMBERS OF CELLS ARE INVOLVED IN FIRE,  
FIRE FIGHTERS SHOULD USE SCBA.

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

Spill Release Procedures:AVOID SKIN AND EYE CONTACT OR INHALATION OF  
VAPORS. EXPOSED LITHIUM FOIL SHOULD BE SUBMERSED IN MINERAL OIL TO  
STOP OXIDATION, SEALED IN PLASTIC BAGS AND DISPOSED OF IN  
ACCORDANCE WITH HAZARDOUS MATER IALS LAWS.  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:LITHIUM BATTERIES ARE MFGL ITEM  
COMPRISED OF MANY COMPONENTS AND WHEN USED AS INTENDED DO NOT  
PRESENT A HEALTH OR SAFETY CONCERN.

Other Precautions:LITHIUM BATTERIES SHOULD NOT BE RECHARGED,  
SHORT-CIRCUITED, PUNCTURED OR MUTILATED IN ANY WAY, OR EXPOSED TO  
TEMPERATURES IN EXCESS OF 85C.

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

Supplemental Safety and Health

BOILING PT

,C:EC 244;PC 242;DME 85. SEC GRAVITY:MNO2 5.03;LI 0.54;DME  
0.868;LITFS 0.6;EC 1.322;PC 1.203. VAP PRESS:EC 0.01;PC 0.03;DME  
61. VAP DEN:EC 3.04;DME 3.1. SOLUBILTIIY:EC/PC MODERATELY SOLUBLE,  
DME/LITFS COMPLETELY SOLUBLE.

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

HCC:F8

Boiling Pt:B.P. Text:SUPPLMENT

Melt/Freeze Pt:M.P/F.P Text:180C LI

Vapor Pres:SUPPLEMENT

Vapor Density:SUPPLEMENT

Spec Gravity:SUPPLEMENT

Evaporation Rate & Reference:4.99(N-BTYL ACE=1)

DME

Solubility in Water:SUPPLEMENTAL

Appearance and Odor:SELAED BATTERY PACK CONTAINING 9 LITHIUM  
CELLS,2.8"X2.8"X1.5", WT=1.1 LBS.

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

Stability Indicator/Materials to Avoid:YES

CONDUCTIVE MATERIALS OR CORROSIVE COMPOUNDS.

Stability Condition to Avoid:TERMINALS SHOULD NOT BE EXPOSED TO WATER.

==== Disposal Considerations =====

Waste Disposal Methods:LITHIUM BATTERIES MUST BE CONSIDERED AS A

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DISPOSED OF IN ACCORDANCE WITH LOCAL AND FEDERAL HAZARDOUS MATERIALS DISPOSAL LAWS AND REGULATIONS.

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