

LITTON -- AMPLIFIER TRAVELING WAVE,11448369, (SUP DA) -- 1420-01-211-5630

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

Product ID:AMPLIFIER TRAVELING WAVE,11448369, (SUP DA)

MSDS Date:04/15/1989

FSC:1420

NIIN:01-211-5630

MSDS Number: BJJPW

=== Responsible Party ===

Company Name:LITTON

Address:960 INDUSTRIAL ROAD

City:SAN CARLOS

State:CA

ZIP:94070

Country:US

Info Phone Num:415-591-8411

Emergency Phone Num:41

5-591-8411

CAGE:NO218

=== Contractor Identification ===

Company Name:LITTON

Address:960 INDUSTRIAL ROAD

Box:City:SAN CARLOS

State:CA

ZIP:94070

Country:US

Phone:415-591-8411

CAGE:NO218

Company Name:LITTON ELECTRON DEVICES .

Address:960 INDUSTRIAL RD

Box:City:SAN CARLOS

State:CA

ZIP:94070

Country:US

Phone:650-591-8411

CAGE:80080

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

Ingred Name:NICKEL (SARA III)

CAS:7440-02-0

RTECS #:QR5950000

Other REC Limits:N/K

OSHA PEL:1 MG/M

3

ACGIH TLV:1 MG/M3; 9192

Ingred Name:COBALT (SARA III)
CAS:7440-48-4
RTECS #:GF8750000
Other REC Limits:N/K
OSHA PEL:0.1 MG/M3;AS CO
ACGIH TLV:0.05 MG/M3;DUST 9293

Ingred Name:COPPER (SARA III)
CAS:7440-50-8
RTECS #:GL5325000
Other REC Limits:N/K
OSHA PEL:0.1MG/M3 FUME/1 DUST
ACGIH TLV:0.2MG/M3 FUME; 9192
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:ZIRCONIUM
CAS:7440-67-7
RTECS #:ZH7070000
Other REC Limits:N/K
OSHA PEL:5 MG/M3/10 STEL
ACGIH TLV:5 MG/M3/10 STEL;9192

Ingred Name:IRON OXIDE
CAS:1309-37-1
RTECS #:NO7400000
Other REC Limits:N/K
OSHA PEL:10 MG/M3 (FE)
ACGIH TLV:5 MG/M3(FE),B2; 9293

Ingred Name:ALUMINUM (SARA III)
CAS:7429-90-5
RTECS #:BD0330000
Other REC Limits:N/K
OSHA PEL:15MG/M3 DUST/5 FUME
ACGIH TLV:10MG/M3 DUST; 9192

Ingred Name:TITANIUM DIOXIDE
CAS:13463-67-7
RTECS #:XR2275000
Other REC Limits:N/K
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9293

Ingred Name:SAMARIUM
CAS:7440-19-9
Other REC Limits:N/K
OSHA PEL:N/K
ACGIH TLV:N/K

Ingre

d Name:PRASEODYMIUM
CAS:7440-10-0
Other REC Limits:N/K
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:OTHER RARE EARTHS
Other REC Limits:N/K
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:EXPLAN OF CARCIN:CARCINOGEN (NTP,1989).WASTE DISP METH:MFR
FOR RECYCLING.
RTECS #:9999999ZZ
Other REC Limits:N/K
OSHA PEL:N/K
ACGIH TLV:N/K

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

LD50 LC50 Mixture:N/K
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:YES OSHA:NO
Health Hazards Acute and Chronic:NO KNOWN HAZARDS FOR MAGNETS AS
SUPPLIED AS A PART OF MICROWAVE TUBES.PROLONGED SKIN CONTACT WITH
NICKEL MAY CAUSE ALLERGIC REACTION IN SENSITIVE INDIVIDUALS.
Explanation of Carcinogenicity:NICKEL:SUFF EVID FOR CARCIN IN HUM/ANIM
(IARC,1987).ACGIH A1=CONFIRMED HUM CARCIN (1990).KNOWN TO CAUSE
CANCER (SUP DA)
Effects of Overexposure:EYES:N/K .SKIN:PROLONGED SKIN CONTACT WITH
NICKEL CAN CAUSE ALLERGIC REACTION IN S
ENSITIVE
INDIVIDUALS.INGESTION:N/K .INHALATION:ANY LONGTERM EXPOSURE TO
DUSTS EXCEEDING TLV LEVE LS MAY RESULT IN IRRITATION TO THE UPPER
RESPIRATORY TRACT.
Medical Cond Aggravated by Exposure:PROLONGED SKIN CONTACT WITH NICKEL
MAY CAUSE ALLERGIC REACTION IN SENSITIVE INDIVIDUALS.

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

First Aid:EYES/SKIN/INGESTION/INHALATION:N/K .

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

Flash Point:N

/K
Lower Limits:N/K
Upper Limits:N/K
Extinguishing Media:DRY NITROGEN,ARGON OR DRY CHEMICAL.
Fire Fighting Procedures:BLANKET FIRES W/ DRY NITROGEN OR ARGON OR
SMOTHER W/ DRY CHEMICAL.DO NOT USE WATER OR HALON AGENTS ON
FIRE.PROD AS SUPPLIED IN MICROWAVE TUBES IS NOT COMBUST.
Unusual Fire/Explosion Hazard:FINE METAL POWDERS PRODUCED BY DRY
GRINDING/MACHINING-EXPLO HAZ.DRY POWDER/GRINDING SLUDGE MAY IGNITE
SPONT IN AIR/OXYGEN.POWDER WILL BURN RAPIDLY & (SUP DA)

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=== Accidental Release Measures =====

Spill Release Procedures:N/K
Neutralizing Agent:N/K

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

Handling and Storage Precautions:MICROWAVE TUBES W/ MAGNETIC MATL
HAVING A MAGNETIC FIELD IN EXCESS OF 0.00525 GAUSS MEASURED AT 15
FT FROM ANY SURFACE,MUST BE SHIPPED ON AIRCRAFT.
Other Precautions:SHIP IN ACCORDANCE WITH 49 CFR 173.21 (F).DO NOT
GRIND,CUT,FILE,SAW OR OTHERWISE CREATE DUST FROM MAGNETIC MATE
RIAL
USED AS A PART OF MICROWAVE TUBES.

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

Respiratory Protection:NO SPECIAL PROTECTION REQUIRED FOR MICROWAVE
TUBES AS SHIPPED.
Ventilation:CONSULT LOCAL SAFETY/HEALTH AUTHORITIES IF ADDITIONAL
GUIDANCE IS NEEDED .
Protective Gloves:NO SPEC PROT REQD FOR TUBES AS SHIPPED.
Eye Protection:NO SPEC PROT REQD FOR TUBES AS SHIPPED.
Other Protective Equipment:NO SPECIAL PROTECTION REQUIRED FOR MICROWAVE
TUBES AS SHIPPED

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Work Hygienic Practices:USE GOOD PERSONAL HYGIENE.

Supplemental Safety and Health

PART NO:PN L5710-51.MP:>1325C,2417F.EXPLO HAZ:INTENSELY & MAY REIGNITE
AFTER FIRE IS EXTING.RARE EARTH METAL POWDERS (SAMARIUM COBALT)
BURN VIGOROUSLY IN HALOGEN/ORG ATMOS.MATLS TO AVOID:W/ STRONG OXI
DIZING AGENTS,ACIDS,OXYGEN & HALOGENATED HYDROCARB.EXPLAN OF
CARCIN:(CAL PROP 65,1989).SUSPECTED HUMAN (SEE ING 11)

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

Boiling Pt:B

.P. Text:N/K
Melt/Freeze Pt:M.P/F.P Text:SEE SUPP
Decomp Temp:Decomp Text:N/K
Spec Gravity:7.0-8.5,WATER=1
Solubility in Water:NOT SOLUBLE
Appearance and Odor:METALLIC SILVER/LIGHT GRAY METAL WITH NO ODOR.

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

Stability Indicator/Materials to Avoid:YES
POWDERS FROM MAGNETS ARE INCOMPATIBLE W/ STRONG OXIDIZING AGENTS.RARE
EARTH MAGNET POWDERS ARE IMCOMPATIBLE (SEE SUPP)
Stability Condition to Avoid:AVOID ANY GENERATION OF AIR
BORNE DUST
WHICH COULD CREATE FIRE & EXPLOSION HAZARD.
Hazardous Decomposition Products:RARE EARTH (SAMARIUM COBALT) MAGNET
POWDER WILL LIBERATE HYDROGEN WHEN EXPOSED TO WATER.
Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

Waste Disposal Methods:DISP MUST BE IAW FED,STATE & LOC
REGS.COORDINATION W/ SUPPORTING INSTALLATION &/OR MACOM
ENVIRONMENTAL COORDINATION PRIOR TO DISP IS REC TO DETERMINE APPROP
DI
SP METH .RECYCLING OF MAGNETS USED IN MICROWAVE TUBES IS
REC.RETURN TO (SEE ING 11)

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