

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:415-591-8411

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/M3

ACGIH TLV:1 MG/M3; 9192

Ingred Name:COBALT (SARA III)

CAS:74

40-48-4
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

Ingred 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 SENSITIVE
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)

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

Spill Release

Procedures: N/K

Neutralizing Agent: N/K

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

Handling and Storage Precautions: MICROWAVE TUBES W/ MAGNETIC MATERIAL 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 MATERIAL 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.

Work Hygienic Practices: USE GOOD PERSONAL HYGIENE.

Supplemental

Information on 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 OXIDIZING 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: D

ecomp 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 AIRBORNE DUST
WHICH COULD CREATE FIRE & EXPLOSION HAZARD.
Hazar
dous 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
DISP METH .RECYCLING OF MAGNETS USED IN MICROWAVE TUBES IS
RE
C.RETURN TO (SEE ING 11)

Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department
of Defense. The United States of America in no manner whatsoever,
expressly or implied, warrants this information to be accurate and
disclaims all liability for its use. Any person utilizing this
document should seek competent professional advice to verify and
assume responsibility for the suitability of this information to
their
particular situation.