

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 Nam

e: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 SENSITIVE INDIVIDUALS.INGESTION:N/K .INHALATION:ANY LONGTERM EXPOSURE TO DUSTS EXCEEDING TLV LEVLS 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 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 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 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: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)

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.