

LITTON SYSTEMS INC/ELECTRONIC DEVICES DIV -- LITTON PN L5839 SAMARIUM COBALT
MAGNETS -- 5960-01-094-9540

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

Product ID:LITTON PN L5839 SAMARIUM COBALT MAGNETS

MSDS Date:04/15/1989

FSC:5960

NIIN:01-094-9540

MSDS Number: BNKMC

=== Responsible Party ===

Company Name:LITTON SYSTEMS INC/ELECTRONIC DEVICES DIV

Address:960 INDUSTRIAL RD

City:SAN CARLOS

State:CA

ZIP:94070-4

116

Country:US

Info Phone Num:(415) 591-8411

Emergency Phone Num:(415) 591-8411

CAGE:80080

=== Contractor Identification ===

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:COBALT

CAS:7440-48-4

RTECS #:GF8750000

Other REC Limits:0.05 PPM

OSHA PEL:0.1 MG/M3;AS CO

ACGIH TLV:0.05 MG/M3;DUST 9293

Ingred Name:SAMARIUM

CAS:

7440-19-9

Ingred Name:PRASEODYMIUM
CAS:7440-10-0

Ingred Name:OTHER RARE EARTHS

Ingred Name:RED IRON OXIDE/IRON (III) OXIDE/FERRIC OXIDE/YELLOW FERRIC
OXIDE/METAL OXIDE/YELLOW IRON OXIDE/IRON OXIDE PIGMENT/IRON

CAS:1309-37-1

RTECS #:NO7400000

OSHA PEL:10 MG/M3 (FE)

ACGIH TLV:5 MG/M3(FE),B2; 9293

Ingred Name:COPPER (DUST & MIST), BRONZE POWDER

CAS:7440-50-8

RTECS #:GL5325000

Other REC Limits:1 MG(CU)/M3 (DUST)

OSHA PEL:0.1 MG(CU)/M3 (FUME)

ACGIH TLV:0.2 MG/M3 (FUME)

EPA Rpt Qty:5000 LBS

DO

T Rpt Qty:5000 LBS

Ingred Name:ZIRCONIUM

CAS:7440-67-7

RTECS #:ZH7070000

OSHA PEL:5 MG/CUM

ACGIH TLV:5 MG/CUM

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

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:INHALATION: UPPER RESPIRATORY TRACT
IRRITATION. SKIN: ALLERGIC REACTION
Explanation of Carcinogenicity:NONE
Effects of Overexposure:INHALATION: UPPER RESPIRATORY TRACT IRRI
TATION.
SKIN: ALLERGIC REACTION.

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

First Aid:OBTAIN MEDICAL ATTENTION IN ALL CASES.

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

Extinguishing Media:DRY NITROGEN OR ARGON OR SMOTHER W/DRY CHEMICAL
Fire Fighting Procedures:DON'T USE WATER OR HALON AGENTS ON FIRE.
POWDER MAY REIGNITE AFTER FIRES ARE EXTINGUISHED. BURNS RAPIDLY &
INTENSELY.

Unusual Fire/Explosion Hazard:FINE METAL POWDERS PROD

UCED BY DRY

GRINDING/MACHINING MAY CAUSE EXPLOSION. DRY POWDER OR GRINDING
SLUDGE MAY IGNITE SPONTANEOUSLY IN AIR OR OXYGEN.

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

Other Precautions:DON'T GRIND, CUT, FILE, SAW OR OTHERWISE CREATE DUST
FROM MAGNETIC MATERIAL USED AS A PART OF MICROWAVE TUBES.

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

Work Hygienic Practices:USE GOOD PERSONAL HYGIENE
Supplemental Safety and Health

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

Melt/Freeze Pt:M.P/F.P Text:2417F

Spec Gravity:7.0-8.5

Solubility in Water:INSOLUBLE

Appearance and Odor:METALLIC SILVER/LIGHT GREY METAL, ODORLESS.

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

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZING AGENTS, ACIDS, OXYGEN & HALOGENATED HYDROCARBONS.

Hazardous Decomposition Products:RARE EARTH (SAMARIUM COLBALT) MAGNET
POWDER WILL LIBERATE HYDROGEN WHEN EX
POSED TO WATER.

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

Waste Disposal Methods:RECYCLING OF MAGNETS USED IN MICROWAVE TUBES IS
RECOMMENDED. RETURN TO MANUFACTURER FOR RECYCLING, OTHERWISE
DISPOSE IN ACCORDANCE W/FEDERAL, STATE & LOCAL REGULATIONS.

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,
ex

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.