

COMMUNICATIONS AND POWER INDUSTRIES INC -- ELECTRON TUBE MA39044X --  
5960-00-073-9277

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

Product ID:ELECTRON TUBE MA39044X

MSDS Date:05/09/2000

FSC:5960

NIIN:00-073-9277

Status Code:A

Article:Y

MSDS Number: CKRRD

=== Responsible Party ===

Company Name:COMMUNICATIONS AND POWER INDUSTRIES INC

Address:150 SOHIER RD

City:BEVERLY

State:MA

ZIP:01915-5595

Country:US

Info

Phone Num:978-922-6000 EXT.285

Emergency Phone Num:978-922-6000

Preparer's Name:FRANK E. TROJAN

CAGE:88236

=== Contractor Identification ===

Company Name:COMMUNICATIONS AND POWER INDUSTRIES INC

Address:150 SOHIER RD

City:BEVERLY

State:MA

ZIP:01915-5595

Country:US

Phone:978-922-6000 EXT.285

CAGE:88236

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

Ingred Name:COBALT 60 RADIOACTIVE MATERIAL

&lt; Wt:1.

Ingred Name:TRITIUM

&lt; Wt:1.

===== Hazards Identif

ication =====

LD50 LC50 Mixture:NONE PROVIDED BY MFR.

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Health Hazards Acute and Chronic:TARGET ORGANS: RESPIRATORY SYSTEM, SKIN, BLADDER, KIDNEYS, AND EYES. SIGNIFICANT SKIN CONTACT MAY RESULT IN BURNS. CONTACT DERMATITIS AND BREATHING DIFFICULTIES. CHRONIC- ALLERGIC ASTHMA, RESTRICTED PULMONARY FUNCTIONS, AND INTERSTITIAL FIBROSIS MAY BE CAUSED BY LONG-TERM OCCUPATIONAL EXPOSURE TO COBALT AND ITS COMPOUNDS.

Explanation of Carcinogenicity:CANCER CAUSING AGENT: BETA OR GAMMA RAYS. COBALT METAL/POWDER IS NOT LISTED AS A CARCINOGEN BY THE NTP, IARC, OR OSHA.

Effects of Overexposure:NAUSEA AND VOMITING AND DIARRHEA FOR HIGH ACUTE DOSES. INHALATION OF COBALT DUST CAN CAUSE PULMONARY SYMPTOMS SUCH AS WHEEZING, IRRITATION OF THE UPPER RESPIRATORY TRACT (URT) AND HYPERSENSITIVITY REACTIONS (ASTHMA). SKIN CONTACT WITH POWDERED COBALT MAY CAUSE ADENITIDES, ESPECIALLY IN THE CORNERS OF THE ELBOWS, KNEES, ANKLES, AND NECK. CONTACT WITH EYES MAY CAUSE CONJUNCTIVITIS. INGESTION MAY PRODUCE A HOT SENSATION ALONG WITH VOMITING, DIARRHEA, AND NAUSEA.

Medical Cond Aggravated by Exposure:HEALING OF DAMAGED TISSUES MAY BE PROLONGED. DISORDERS OF THE SKIN & THE URT MAY BE WORSENER BY EXPOSURE TO COBALT.

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

First Aid:EYE: IMMEDIATELY FLUSH EYES, INCLUDING UNDER THE EYELIDS, GENTLY BUT THOROUGHLY WITH PLENTY OF RUNNING WATER FOR AT LEAST 15 MINS. SKIN: IMMEDIATELY WASH THE AFFECTED AREA WITH SOAP & WATER. INHALATION: REMOVE THE EXPOSED PERSON TO FRESH AIR, RESTORE &/OR SUPPORT HIS OR HER BREATHING AS NEEDED. INGESTION: NEVER GIVE ANYTHING BY MOUTH TO SOMEONE WHO IS UNCONSCIOUS OR CONVULSING. IF COBALT SALTS ARE INGESTED, GIVE ONE TO TWO GLASSES OF WATER & INDUCE VOMITING. DECONTAMINATE THE EXPOSED INDIVIDUAL IF EXPOSED TO RADIOACTIVE MATERIAL. TRANSPORT TO HOSPITAL IF NAUSEA/VOMITING/DIARRHEA OCCUR.

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

Autoignition Temp:Autoignition Temp Text:NOT APPLICABLE  
Lower Limits:NOT APPLICABLE  
Upper Limits:NOT APPLICABLE

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

Spill Release Procedures:NONE PROVIDED BY MFR.  
Neutralizing Agent:NONE PROVIDED BY MFR.

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

Handling and Storage Precautions:ALL PERSONS

WHO WORK WITH OR ARE  
EXPOSED TO MICROWAVE TUBES OR EQUIPMENT WHICH UTILIZES SUCH TUBES  
MUST TAKE PRECAUTIONS TO PROTECT THEMSELVES AGAINST POSSIBLE  
SERIOUS BODILY INJURY. DO NOT BE CARELESS AROUND SUCH PRODUCTS.  
Other Precautions:NONE PROVIDED BY MFR.

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

Respiratory Protection:IF SPILLED, WEAR RADIONUCLIDE CARTRIDGE  
RESPIRATOR.  
Ventilation:PLACE AFFECTED COMPONENT IN LOCAL EXHAUST.  
Protective Gloves:DISPOSABLE GLOVES.  
Eye Protection:GOGGLES  
Work Hygienic Practices:WASH HANDS  
Supplemental Safety and Health  
THIS DEVICE IS A RECEIVER PROTECTOR TUBE WHICH CONTAINS A SMALL AMOUNTS  
OF COBALT 60 AND A SMALL AMOUNT OF TRITIUM (H3). THIS IS A SEALED  
SOURCE AND NORMAL HANDLING WILL PRESENT NO RADIATION PROBLEMS.  
THIS DEVICE IS A MANUFACTURED ARTICLE IN ACCORDANCE WITH 49 CFR  
173.422 AND 29 CFR 1910.1200.

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

HCC:A1  
Boiling Pt:=29  
00.C, 5252.F  
B.P. Text:COBALT  
Melt/Freeze Pt:=1495.C, #####F  
M.P/F.P Text:COBALT  
Vapor Pres: