

VARIAN ASSOCIATE INC;CROSSED FIELD & RECEIVER PROT -- VDX1141 ELECTRON TUBE --  
5960-01-044-9439

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Product Identification  
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Product ID:VDX1141 ELECTRON TUBE

MSDS Date:02/02/1996

FSC:5960

NIIN:01-044-9439

Status Code:A

MSDS Number: CJLMQ

=== Responsible Party ===

Company Name:VARIAN ASSOCIATE INC;CROSSED FIELD & RECEIVER PROT

Address:150 SOHIER RD

City:BEVERLY

State:MA

ZIP:01915-1018

Country

:US

Info Phone Num:508-922-6000 EXT.285

Emergency Phone Num:508-922-6000 EXT.285

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

Contract Num:SP0960-96-M-3682

CAGE:88236

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Composition/Information on Ingredients  
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Ingred Name:TRITIUM

Other REC Limits:NONE RECOMMENDED

Ingred Name:NON-HAZARDOUS INGREDIENTS

Fraction by Wt:

BALANCE

Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:NOT GIVEN FOR PRODUCT AS A WHOLE

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

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:SIGNIFICANT EXPOSURE TO A RADIONUCLIDE  
MAY CAUSE CANCER.

Explanation of Carcinogenicity:NOT LISTED IN NTP, IARC OR OSHA PER  
MANUFACTURER.

Effects of Overexposure:TRITIUM IS A BETA EMIT  
TER. IF EXPOSURE IS

SUSPECTED, SEEK MEDICAL ATTENTION, URINE ASSAY FOR TRITIUM IS THE  
ONLY MEANS OF MEASURING THE DEGREE OF EXPOSURE.

Medical Cond Aggravated by Exposure:HEALING OF DAMAGED TISSUES MAY BE  
PROLONGED.

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

First Aid:EYES: FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS  
OPEN. GET MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. IF  
IRRITATION PERSIST, GET MEDICAL ATTENTION. INHALATION: REMOV

E TO

FRESH AIR. RESTORE BREATHING. GET MEDICAL ATTENTION. INGESTION: A  
HIGH ORAL FLUID INTAKE SHOULD BE ADMINISTERED FOLLOWING TRITIUM  
EXPOSURE.

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

Flash Point:NONFLAMMABLE

Lower Limits:NOT GIVEN

Upper Limits:NOT GIVEN

Extinguishing Media:NONFLAMMABLE. USE EXTINGUISHING MEDIA SUITABLE FOR  
SURROUNDING FIRE.

Fire Fighting Procedures:NONFLAMMABLE. USE STANDARD FIREFIGHTING  
PROCEDURES FOR SURROUNDING MATERIALS IN  
THE FIRE.

Unusual Fire/Explosion Hazard:NONE SPECIFIED BY MANUFACTURER.

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

Spill Release Procedures:WEAR RADIONUCLIDE CARTRIDGE RESPIRATOR AND  
PROPER PERSONAL PROTECTIVE CLOTHING/GLOVES/GOGGLES. COLLECT FOR  
DISPOSAL.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:DO NOT GET IN EYES, ON SKIN, MOUTH OR  
CLOTHING. T

HIS DEVICE IS A RECEIVER PROTECTOR TUBE WHICH CONTAINS A SMALL AMOUNT OF TRITIUM.

Other Precautions:TUBE IS CONSIDERED A SEALED SOURCE AND NORMAL HANDLING WILL PRESENT NO RADIATION PROBLEMS. THE DEVICE IS A MANUFACTURED ARTICLE.

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===== 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

Other Protective Equipment:CHEMICAL RESISTANT CLOTHING AS NECESSARY TO PREVENT SKIN CONTACT. AN EMERGENCY EYEWASH AND SHOWER SHOULD BE AVAILABLE.

Work Hygienic Practices:WASH HANDS THOROUGHLY WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES.

Supplemental Safety and Health  
NONE SPECIFIED BY MANUFACTURER.

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

HCC:A2

Boiling Pt:B.P. Text:-414F,-248C

Melt/Freeze Pt:M.P/F.P Text:-425F,-254C

Vapor Pres:18.317 ATM

Vapor Density:NOT GIVEN

Spec Gravity:6.0

Evaporation Rate & Reference:NOT GIVEN

Solubility in Water:COMPLETE

Appearance and Odor:GAS, NO ODOR

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

Stability Indicator/Materials to Avoid:YES  
OXIDIZERS

Stability Condition to Avoid:TEMPERATURES IN EXCESS OF 400C WILL CAUSE DECOMPOSITION OF TIT2 WITH RELEASE OF TRITIUM GAS.

Hazardous Decomposition Products:UNBOUND TRITIUM

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===== Disposal

Considerations =====

Waste Disposal Methods:PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

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