

Product ID:BTR 678 MSDS Date:06/30/1998 FSC:5960 NIIN:01-066-4771 MSDS Number: BSVQL === Responsible Party === Company Name: COMMUNICATIONS & POWER IND INC/BEVERLY MICROWAVE D Address:150 SOHIER RD City:BEVERLY State:MA ZIP:01915-1018 Country:US Info Phone Num:508-922-6000 EXT.285 / FAX 2736 Emergency Phone Num:978-922-6000 (8 AM - 4 PM) Preparer's Name: FRANK E. TROJAN CAGE: JO786 === Contractor Identification === Company Name: COMMUNICATIONS & POWER IND INC/BEVERLY MICROWAVE D Address:150 SOHIER RD City:BEVERLY State:MA ZIP:01915-1018 Country:US Phone:978-922-6000 EXT.285 / FAX 2736 CAGE: JO786 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:SP0960-98-DC027 CAGE:88236 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:SP0960-98-RX157 CAGE:88236 Ingred Name: PROMETHIUM 147 <: Wt:1. Other REC Limits:NONE RECOMMENDED

Ingred Name:TRITIUM (H3) CAS:10028-17-8 LD50 LC50 Mixture:NOT RELEVANT Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: TARGET ORGANS: NONE (HMIS). ACUTE AND CHRONIC - PRODUCT IS AN ARTICLE. IT IS A RECEIVER PROTECTOR TUBE WHICH CONTAINS A SMALL AMOUNT OF PROMETHIUM 147 AND A SMALL AMOUNT OF TRITIUM. THE TUBE IS SEALED AND NORMAL HANDLING WILL PRESENT NO RADIATION PROBLEMS. SIGNIFICANT EXPOSURE MAY CAUSE CANCER. Explanation of Carcinogenicity: CAUTION! CONTAINS RADIOACTIVE MATERIAL. MAY CAUSE CANCER. Effects of Overexposure: TRITIUM IS A BETA EMITTER. 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. First Aid: EYE CONTACT: IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SKIN CONTACT: IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. INHALATION: REMOVE TO FRESH AIR. INGESTION: A HIGH ORAL FLUID IN TAKE SHOULD BE ADMINISTERED FOLLOWING TRITIUM EXPOSURE. Flash Point:NOT RELEVANT Lower Limits:NOT RELEVANT Upper Limits:NOT RELEVANT Extinguishing Media: WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY CHEMICAL FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS. F ire Fighting Procedures: WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. Unusual Fire/Explosion Hazard:NOT RELEVANT Spill Release Procedures: IF BROKEN, WEAR PROTECTIVE EQUIPMENT. COLLECT AND TRANSFER TO PROPER CONTAINER FOR DISPOSAL. Neutralizing Agent:NOT RELEVANT Handling and Storage Precautions: HANDLE WITH CARE. Othe

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r Precautions:WASH HANDS BEFORE EATING OR DRINKING. OTHER EXPOSURE LIMITS: 1250 MILLIREMS PER CALENDAR QUARTER.

Respiratory Protection:NONE REQUIRED IF USED AS INTENDED Ventilation:NONE REQUIRED IF USED AS INTENDED Protective Gloves:RUBBER, IF BROKEN Eye Protection:NONE REQUIRED IF USED AS INTENDED Other Protective Equipment:NONE REQUIRED IF USED AS INTENDED Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES A ND

RECOMMENDED PROCEDURES.

Supplemental Safety and Health

THE MANUFACTURER STATES THIS DEVICE IS A MANUFACTURED ARTICLE IN ACCORDANCE WITH 49 CFR 173.422. THIS DEVICE IS AN ARTICLE IN ACCORDANCE WITH 29 CFR 1910.1200. THIS ELECTRON TUBE IS MANUFACTURED IN CO MPLIANCE WITH 10 CFR 30.15(A)(8). NRC LICENSE NUMBER: 20-02237-04, 20-02237-03E.

HCC:A2

NRC/State Lic Num:NOT RELEVANT Decomp Temp:Decomp Text:NOT KNO WN Spec Gravity:NOT RELEVANT Viscosity:NOT RELEVANT Evaporation Rate & amp; Reference:NOT RELEVANT Solubility in Water:NOT RELEVANT Appearance and Odor:PRODUCT IS AN ARTICLE.

Stability Indicator/Materials to Avoid:YES CORROSIVES Stability Condition to Avoid:NOT RELEVANT Hazardous Decomposition Products:UNBOUND PROMETHIUM-147

Waste Disposal Methods: PREVENT WAS

TE FROM CONTAMINATING SURROUNDING

ENVIRONMENT. KEEP PERSONNEL AWAY. DISCARD ANY PRODUCT, RESIDUE, DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE W ITH LOCAL, STATE AND FEDERAL REGULATIONS.

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