PHILIPS LIGHTING CO/DIV OF N. AMERICAN PHILIPS COR -- JAN5D22;(MSDS=THORIATED TUNGSTEN METAL PRODUCTS) -- 5960-00-188-0948 Product ID:JAN5D22;(MSDS=THORIATED TUNGSTEN METAL PRODUCTS) MSDS Date:07/01/1986 FSC:5960 NIIN:00-188-0948 MSDS Number: CFKXS === Responsible Party === Company Name: PHILIPS LIGHTING CO/DIV OF N. AMERICAN PHILIPS COR Address: 100 WESTINGHOUSE PLAZA City:BLOOMFIELD State:NJ ZIP:07003 Country:US Info Phone Nu m:201-563-3000 Emergency Phone Num:201-563-3000 CAGE:77625 === Contractor Identification === Company Name: NATIONAL ELECTRONICS DIV OF RICHARDSON ELECTRONICS Address:40W267 KESLINGER RD Box:City:LAFOX State:IL ZIP:60147 Country:US CAGE:83781 Company Name: PHILIPS LIGHTING CO/DIV OF N. AMERICAN PHILIPS COR Box:City:HIGHTSTOWN State:NJ Country:US Phone:201-563-3000 CAGE:77625 ======= Composition/Information on Ingredients ======== Ingred Name: TUNGSTEN, AS W, SOLUBLE COMPOUNDS. CAS:7440-33-7 RTECS #:YO7175000 Fraction by Wt: 96-100% Other REC Limits: NONE RECOMMENDED OSHA PEL:NOE ESTABLISHED ACGIH TLV:1 MG/M3/3 STEL; 9596 Ingred Name:THORIUM (NATURAL) Fraction by Wt: 0-4% Other REC Limits: NONE RECOMMENDED

LD50 LC50 Mixture:TLV FOR TUNGTSEN IS 5MG/M*3 Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: THIS TUBE CONTAINS EL

THER TUNGSTEN OR

THORIATED TUNGSTEN.THORIUM IS A NATURALLY OCCURING RADIOACTIVE ELEMENT.NO HEALTH HAZARD IS ASSOCIATED WITH NATURAL THORIUM, HOWEVER LONG TERM EXPOSURE TO TO DUST O R FUMES MAY CAUSE LUNG PROBLEMS.

Explanation of Carcinogenicity: THERE ARE NO INGREDIENTS ABOVE 0.1% WHICH ARE IDENTIFIED AS CARCINOGENS BY NTP, IARC OR OSHA.

Effects of Overexposure: NONE SPECIFIED BY MANUFACTURER.

Medical Cond Aggravated by Exposure: NONE SPECIFIED BY MANUFACTURER.

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

First Aid:SKIN:REMOVE CONTAMINATED CLOTHING;WASH WITH SOAP AND WATER.GET MEDICAL ATTENTION IF NEEDED.EYES:FLUSH WITH WATER FOR 15 MINUTES.GET IMMEDIATE MEDICAL ATTENTION.INHAL:REMOVE TO FRESH AIR.GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED.GET IMMEDIATE MEDICAL ATTENTION.INGEST:GET PROMPT QUALIFIED MEDICAL ATTENTION.IF CONSCIOUS,INDUCE VOMITING.

============ Fire Fighting Measures ========================= Flash Poi nt:NONE Extinguishing Media: USE MEDIA APPROPRIATE FOR SURROUNDING FIRE. Fire Fighting Procedures: HMIS SUGGESTS TO USE A SELF-CONTAINED BREATHING APPARATUS WHENEVER FIGHTING A CHEMICAL FIRE. Unusual Fire/Explosion Hazard: NO UNUSUAL FIRE HAZARD FOR UNIT OF ISSUE. ========= Accidental Release Measures ============ Spill Release Procedures:WET SWEEP OR VACUUM;DO NOT CREATE DUST;PLACE IN AN APPROPRIATE CONTAINER FOR DISPOSAL. Neutralizing Agent: NOT APPLICABLE. ========= ====== Handling and Storage ========== Handling and Storage Precautions: STORE IN A COOL, DRY, WELL-VENTILATED PLACE.KEEP AWAY FROM HEAT, SPARKS, FLAMES AND PHYSICAL DAMAGE. Other Precautions: NONE SPECIFIED BY MANUFACTURER.

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

Respiratory Protection: WHERE APPROPRIATE, USE A NIOSH/MSHA APPROVED RESPIRATOR FOR TOXIC DUST/RADIONUCLIDES.

Ventilation: USE LOCAL EXHAUST WHEN APPROACHING TLV.

Protective Gloves: RUBBER

Eye Protection:SAFETY GLASSES OR GOGGLES.

Other Protective Equipment:PROTECTIVE CLOTHING,AS NEEDED.PROVIDE A LOCAL EYE WASH STATION AND SAFETY SHOWER.

Work Hygienic Practices: USE REASONABLE CARE IN HANDLING THIS PRODUCT. WASH HANDS AFTER USE AND BEFORE EATING.

Supplemental Safety and Health

RICHARDSON HAS SUBMITTED 2 MSDS'S:TUNGSTEN(100%),THORIATED TUNGTSEN(4%THORIUM).MFR FURTHER STATES THAT THIS ITEM DOES NOT CONTAIN MERCURY.

========= Physical/Chemical Properties ===
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HCC:N1 Appearance and Odor:ELECTRON TUBE.
========= Stability and Reactivity Data ==========
Stability Indicator/Materials to Avoid:YES STRONG OXIDIZING AGENTS(EG. HALOGENS,NITROC AND SULFURINC ACID). Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER. Hazardous Decomposition Products:TUNGSTEN TRIOXIDE.
======= Disposal Considerations ==========

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE WITH FEDERAL,STATE AND LOCAL REGULATIONS.

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