

HUGHES AIRCRAFT CO RADAR SYSTEMS GROUP -- THERMAL RECEIVER UNIT,12599972,PART B  
-- 1240-01-293-9706

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

Product ID:THERMAL RECEIVER UNIT,12599972,PART B

MSDS Date:12/04/1992

FSC:1240

NIIN:01-293-9706

Kit Part:Y

MSDS Number: CCCHB

=== Responsible Party ===

Company Name:HUGHES AIRCRAFT CO RADAR SYSTEMS GROUP

Address:BLDG C1 MS A142

Box:92426

City:LOS ANGELES

State:CA

ZIP:90009

Country:US

Info Phone Num:213-568-7200 / FAX 213-568-6942

Emergency Phone Num:213-568-7200

Preparer's Name:D. L. COLLINS

CAGE:82577

=== Contractor Identification ===

Company Name:EM INDUSTRIES INC CHEMICALS & PIGMENTS DIVISION

Address:7 SKYLINE DRIVE

Box:City:HAWTHORNE

State:NY

ZIP:10532

Country:US

Phone:914-592-4660

CAGE:0AL61

Company Name:HUGHES AIRCRAFT CO RADAR SYSTEMS GROUP

Address:BLDG C1 MS A142

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Composition/Information on Ingredients  
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Inged Name:THORIUM TETRAFLUORIDE

CAS:13709-59-6

Other REC Limits:NONE RECOMMENDED

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Hazards Identification  
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LD50 LC50 Mixture:LD50 (ORAL, RAT) IS NOT KNOWN.

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

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

Health Hazards Acute and Chronic:TARGET ORGANS:EYE, SKIN, RESPIRATORY

TRACT. ACUTE- MAY CAUSE IRRITATION OF EYE

S, SKIN AND RESPIRATORY

TRACT. BREATHING DUST OF THORIUM COMPOUNDS MAY INCREASE RISK OF RADIATION INDUCED CANCER. EFFECTS OF INGESTION IS UNKNOWN. TREAT AS TOXIC. IONIZING RADIATION MAY CAUSE TISSUE DAMAGE. CHRONIC- MAY CAUSE TISSUE DAMAGE.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:IRRITATION, TISSUE DAMAGE

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First Aid Measures  
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First Aid:GET MEDICAL ATTENTION IF SYMPTOMS PERSIST. SKIN:REMOVE CONTAMINATED CLO

THING. WASH SKIN WITH SOAP &amp; WATER. EYE:FLUSH WITH

WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. INHALED:REMOVE TO FRESH AIR. PROVIDE OXYGEN/CPR IF NEEDED. ORAL:IF CONSCIOUS, DRINK 1-2

GLASSES OF WATER. INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. CALL PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON

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Fire Fighting Measures  
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Extinguishing Media:USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL.

Fire Fighting Procedures:WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS.

Unusual Fire/Explosion Hazard:RADIOACTIVE MATERIAL.

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Accidental Release Measures  
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Spill Release Procedures:WEAR NIOSH-APPROVED RESPIRATOR, CHEMICAL GLOVES AND LAB COAT. CAREFULLY COLLECT SPILLED MATERIAL AND TRANSFER TO APPROPRIATE RADIOACTIVE MATERIAL WASTE CONTAINER. WASH SPILL SITE WITH DETERGENT AND WA TER.

Neutralizing Agent:NOT REL

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

Handling and Storage Precautions:STORE IN RADIOACTIVE STORAGE AREA, AWAY FROM INCOMPATIBLE MATERIALS. KEEP OUT OF REACH OF CHILDREN.  
Other Precautions:THORIUM FLUORIDE IS AN ALPHA EMITTER. ALPHA PARTICLES DO NOT POSE AN EXTERNAL DAMAGE BUT TISSUE DAMAGE MAY OCCUR IF INHALED OR INGESTED. RADIOACTIVITY OF LENSES CONTAINING THORIUM FLUORIDE IS BELOW DETECTABLE LIMITS (0.01 MR/HR).

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

Respiratory Protection:WEAR NIOSH-APPROVED RESPIRATOR.  
Ventilation:USE GENERAL OR LOCAL EXHAUST VENTILATION (75-100 CFM)  
Protective Gloves:TWO PAIRS OF GLOVES (LATEX)  
Eye Protection:SAFETY GLASSES/CHEMICAL GOGGLES  
Other Protective Equipment:SAFETY SHOWER, EYE WASH FOUNTAIN, LAB COAT, FILM BADGE  
Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.

Supplemental Safety and Health

KEY1:A3. THIS KIT HAS HELIUM (PNI A) AND RADIOACTIVE MATERIAL (PNI B), SAME NSN.

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

HCC:A2  
NRC/State Lic Num:NOT RELEVANT  
Melt/Freeze Pt:M.P/F.P Text:2030F,1110C  
Spec Gravity:6.300  
Viscosity:NOT RELEVANT  
Evaporation Rate & Reference:NOT RELEVANT  
Solubility in Water:INSOLUBLE  
Appearance and Odor:OFF WHITE GRANULES - ODORLESS

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

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ability Indicator/Materials to Avoid: YES  
STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG BASES  
Stability Condition to Avoid: EXCESSIVE HEAT, FIRE

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

Waste Disposal Methods: SEND TO LICENSED RADIOACTIVE MATERIAL DISPOSAL FACILITY, IN FULL COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

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