

NUCLEAR RESEARCH CORP -- RADIAC SET -- 6665-01-222-1425

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

Product ID:RADIAC SET  
MSDS Date:11/16/1998  
FSC:6665  
NIIN:01-222-1425  
Status Code:A  
MSDS Number: CHZBC  
=== Responsible Party ===  
Company Name:NUCLEAR RESEARCH CORP  
Address:RICHBOYNTON ROAD  
Box:937  
City:DOVER  
State:NJ  
ZIP:07801  
Country:US  
Info Phone Num:973-361-5600  
Emergency Phone Num:973-361-5600  
Preparer's  
Name:DOD,DSCR,HMIS,VBA  
CAGE:06442

=== Contractor Identification ===

Company Name:NUCLEAR RESEARCH CORP DOVER DIVISION  
Address:58 RICHBOYNTON RD  
Box:937  
City:DOVER  
State:NJ  
ZIP:07801  
Country:US  
Phone:973-361-5600  
CAGE:06442

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

Ingred Name:THORIUM 232  
CAS:7440-29-1  
Fraction by Wt: 100%  
Other REC Limits:NONE RECOMMENDED

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

Routes of Entry: Inhalation:NO Skin:NO I

ngestion:NO

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

Health Hazards Acute and Chronic:SOURCE MATERIAL IS ENCLOSED AND IS WEAKLY RADIOACTIVE AND NOT A HEALTH PROBLEM UNLESS EXPOSED.SKIN:RADIOACTIVE EXPOSURE OF BARE SKIN CAN RESULT FROM PROLONGED EXPOSURE.INGESTION: RADIOACTIVE EXPOSURE OF INTERNAL ORGANS CAN RESULT FROM INGESTION OF METAL THORIUM-232.CHRONIC EFFECTS:PROLONGED EXPOSURE CAN BE CARCINOGENIC

Explanation of Carcinogenicity:PROLONGED EXPOSURE TO SOURCE MATERIAL CAN BE CARCINOGENIC.

Effects of Overexposure:NONE SPECIFIED.

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

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First Aid Measures  
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First Aid:NONE.

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Fire Fighting Measures  
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Flash Point:NONE

Lower Limits:NONE

Upper Limits:NONE

Extinguishing Media:MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Fire Fighting Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS/FULL

PROTECTIVE GEAR FOR FIRE FIGHTING OPERATIONS INVOLVING LARGE AMOUNTS OF SOURCE MATERIAL AS SMOKE MAY BE RADIOACTIVE

Unusual Fire/Explosion Hazard:FIRE MAY PRODUCE TOXIC PRODUCTS OF COMBUSTION.

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Accidental Release Measures  
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Spill Release Procedures:MOVE UNDAMAGED PACKAGES FROM THE SPILL AREA. PICK UP SOURCE MATERIAL. DO NOT TOUCH SOURCE MATERIAL WITH HANDS. DECONTAMINATE THE SPILL AREA.

=====  
Handling and Storage  
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Handling and Storage Precautions:DO NOT TOUCH BARE SOURCE METAL WITH HANDS. KEEP SOURCE MATERIAL IN STORAGE CONTAINER WHEN NOT IN USE.

Other Precautions:RADIOACTIVE SOURCE MATERIAL IS CONTAINED SO THAT NORMAL HANDLING DOES NOT PRESENT A RADIATION PROBLEM.

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Exposure Controls/Personal Protection  
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Respiratory Protection:NONE NORMALLY REQUIRED.

Ventilation:USE NORMAL, ADEQUATE MECHANICAL VENTILATION.

Protective Gloves:NOT REQUIRED

IF SOURCE MAT'L NOT TOUCHED

Eye Protection:NONE NORMALLY REQUIRED.

Other Protective Equipment:PROTECTIVE CLOTHING NOT NORMALLY REQUIRED.

Work Hygienic Practices:WASH HANDS AFTER USE AND BEFORE EATING,  
DRINKING, OR SMOKING.

Supplemental Safety and Health

THERE IS NOT AN OSHA REQUIREMENT FOR AN MSDS FOR RADIATION HAZARDS.

SOURCE MATERIAL, THORIUM 232, IS WEAKLY RADIOACTIVE. RADIOACTIVITY  
OF ITEM IS 3-NANO CURIES.

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

HC

C:A1

Boiling Pt:B.P. Text:8132F,4500C

Spec Gravity:18.95

Solubility in Water:INSOLUBLE

Appearance and Odor:THORIUM 232: SOFT METAL WITH BRIGHT SILVERY LUSTER  
WHEN FRESHLY CUT.

Percent Volatiles by Volume:0

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

Stability Indicator/Materials to Avoid:YES

AVOID CONTACTS WITH CHLORINE, SULFUR, PHOSPHOROUS, AND CONCENTRATED  
ACIDS.

Stability Condition to Avoid:FIRE, PHYSICAL DAMAGE.

Hazardous Decomposition Products:NONE.

Condi

ons to Avoid Polymerization:WILL NOT OCCUR.

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

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

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