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## **Material Safety Data Sheet**

**Transportation Emergency: 1-800-451-8346**

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### **SECTION 1. ----- CHEMICAL IDENTIFICATION-----**

CATALOG #: M075-2-X1  
NAME: RHENIUM HEXAFLUORIDE  
SYNONYM: HEXAFLUORORHENIUM

### **SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----**

CAS NUMBER: 10049-17-9  
MOLECULAR FORMULA: F<sub>6</sub>Re  
MOLECULAR WEIGHT: 300.2

### **SECTION 3. ----- HAZARDS IDENTIFICATION -----**

#### **LABEL PRECAUTIONARY STATEMENTS**

**CORROSIVE.**  
**CAUSES SKIN BURNS AND EYE DAMAGE. DESTRUCTIVE TO THE RESPIRATORY TRACT.**  
**TOXIC.**  
**TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.**  
**REACTS VIOLENTLY WITH WATER.**

### **SECTION 4. ----- FIRST-AID MEASURES-----**

#### **ORAL EXPOSURE**

**IF SWALLOWED, WASH OUT MOUTH WITH COPIOUS AMOUNTS OF WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.**

#### **INHALATION EXPOSURE**

**IF INHALED, REMOVE EXPOSED TO FRESH AIR. IF BREATHING IS DIFFICULT, CALL A PHYSICIAN.**

#### **DERMAL EXPOSURE**

**IN CASE OF EXPOSURE, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER. CALL A PHYSICIAN.**

#### **EYE EXPOSURE**

**IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.**

**SECTION 5. ----- FIRE FIGHTING MEASURES -----**

**FLASH POINT**

NOT ESTABLISHED

**EXTINGUISHING MEDIA**

SUITABLE: FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

UNSUITABLE: DO NOT USE WATER.

COOL ALL AFFECTED CONTAINERS WITH FLOODING QUANTITIES OF WATER.

**FIREFIGHTING**

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

**SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----**

**PERSONAL PROTECTION**

AVOID BREATHING DUST, VAPOR MIST, OR GAS. ENSURE ADEQYATE VENTILATION. WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER GLOVES, AND EYE PROTECTION. KEEP UNPROTECTED PERSONS AWAY. NORMAL MEASURES OF PREVENTIVE FIRE PROTECTION.

**ENVIRONMENTAL PROTECTION**

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. TAKE PRECAUTIONS TO ENSURE PRODUCT DOES NOT CONTAMINATE THE GROUND OR ENTER THE DRAINAGE SYSTEM.

**COLLECTION**

SWEEP UP OR ABSORB ON DRY SAND OR VERMICULITE, SWEEP UP AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS.

**SECTION 7. ----- HANDLING AND STORAGE-----**

**HANDLING**

USER EXPOSURE: AVOID INHALATION. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

**STORAGE**

SUITABLE: TIGHTLY CLOSED CONTAINERS IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. NEVER ALLOW PRODUCT TO GET IN CONTACT WITH WATER DURING STORAGE. STORE IN COOL, DRY PLACE. MOISTURE SENSITIVE. STORE UNDER INERT GAS. AVOID DIRECT SUNLIGHT.

## **SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----**

### **ENGINEERING CONTROLS**

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

### **PERSONAL PROTECTIVE EQUIPMENT**

RESPIRATORY: USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

HAND: PROTECTIVE GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE.

EYE: CHEMICAL SAFETY GOGGLES.

### **GENERAL HYGIENE MEASURES**

WASH THOROUGHLY AFTER HANDLING.

## **SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----**

### **APPEARANCE AND ODOR**

LOW MELTING SOLID.

### **PHYSICAL PROPERTIES**

MELTING POINT: 18.8 °C  
BOILING POINT: 47.6 °C  
VAPOR PRESSURE: 545 mmHg @ 25 °C  
DENSITY: 6 g/mL @ 25 °C

## **SECTION 10. -----STABILITY AND REACTIVITY -----**

### **STABILITY**

STABLE: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS, BASES, ACIDS, ALCOHOLS. REACTS VIOLENTLY WITH WATER AND ACIDS.

CONDITIONS TO AVOID: HEAT, FLAMES AND SPARKS, EXTREMES OF TEMPERATURE, MOISTURE AND DIRECT SUNLIGHT.

### **HAZARDOUS DECOMPOSITION PRODUCTS**

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN FLUORIDE, RHENIUM/RHENIUM OXIDES.

### **HAZARDOUS POLYMERIZATION**

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

## **SECTION 11. ----- TOXICOLOGICAL INFORMATION -----**

### **ROUTE OF EXPOSURE**

INHALATION: TOXIC IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

INGESTION: TOXIC IF SWALLOWED.

SKIN: TOXIC IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS.

EYES: CAUSES EYE BURNS.

### **SIGNS AND SYMPTOMS OF EXPOSURE**

TO THE BEST OF OUR KNOWLEDGE, THE TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN FULLY DETERMINED.

## **SECTION 12. ----- ECOLOGICAL INFORMATION -----**

NOT YET AVAILABLE.

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY.  
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS  
MATERIAL. OBSERVE ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

**SECTION 14. ----- TRANSPORT INFORMATION -----**

DOT

UN3390 - HC: 6.1, 8 - PG: I

**SECTION 15. ----- REGULATORY INFORMATION -----**

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: C, T

INDICATION OF DANGER: CORROSIVE. TOXIC.

RISK STATEMENTS: 14-23/24/25-29-32-34-41

SAFETY STATEMENTS: 14-22-23-24/25-26-27-29-30-36/37/39-45

UNITED STATES REGULATORY INFORMATION

TSCA: LISTED ON TSCA INVENTORY; FOR R&D USE ONLY

**SECTION 16. ----- OTHER INFORMATION-----**

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO  
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SYNQUEST LABS, INC. SHALL  
NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING  
OR FROM CONTACT WITH THE ABOVE PRODUCT.