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## Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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

CATALOG #: M054-2-02  
NAME: XENON DIFLUORIDE  
SYNONYMS: XENON (II) FLUORIDE

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

CAS #: 13709-36-9  
MF: XeF<sub>2</sub> = 169.29  
EC NO: 237-251-2

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

#### LABEL PRECAUTIONARY STATEMENTS

OXIDIZING. HIGHLY TOXIC (USA) VERY TOXIC (EU).  
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE. TOXIC IF  
SWALLOWED. VERY TOXIC BY INHALATION. CAUSES BURNS.

#### HMIS RATING

HEALTH: 3  
FLAMMABILITY: 0  
REACTIVITY: 3  
SPECIAL HAZARD(S): OXIDIZER

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

#### ORAL EXPOSURE

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

#### INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT,  
CALL A PHYSICIAN.

#### DERMAL EXPOSURE

IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR  
AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES.  
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 -----**

**EXTINGUISHING MEDIA**

SUITABLE: CARBON DIOXIDE, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM.

**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.

CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. MAY ACCELERATE COMBUSTION.

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

**PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL**

EVACUATE AREA.

**PROCEDURE(S) OF PERSONAL PRECAUTION(S)**

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

**METHODS FOR CLEANING UP**

SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

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

**HANDLING**

USER EXPOSURE: DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

**STORAGE**

SUITABLE: KEEP TIGHTLY CLOSED. KEEP AWAY FROM COMBUSTIBLE MATERIALS, HEAT, SPARKS, AND OPEN FLAME.

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

**ENGINEERING CONTROLS**

USE ONLY IN A CHEMICAL FUME HOOD. SAFETY SHOWER AND EYE BATH.

**PERSONAL PROTECTIVE EQUIPMENT**

RESPIRATORY: USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR.

HAND: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

**GENERAL HYGIENE MEASURES**

WASH THOROUGHLY AFTER HANDLING. REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY. DISCARD CONTAMINATED SHOES.

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

APPEARANCE AND ODOR

WHITE CRYSTALS

PHYSICAL PROPERTIES

MELTING POINT: 129 °C  
SPECIFIC GRAVITY: 4.320 g/cm<sup>3</sup> @ 25 °C  
VAPOR PRESSURE: 3.8 mmHg @ 20 °C

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

STABILITY

STABLE: STABLE.

MATERIALS TO AVOID: ORGANIC MATERIALS, FINELY POWDERED METALS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN FLUORIDE.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

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

ROUTE OF EXPOSURE

SKIN CONTACT: CAUSES BURNS.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

EYE CONTACT: CAUSES BURNS.

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

INGESTION: TOXIC IF SWALLOWED.

SIGNS AND SYMPTOMS OF EXPOSURE

SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, AND VOMITING. MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN.

INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS, AND PULMONARY EDEMA.

TOXICITY DATA

ORAL

MOUSE

90 mg/kg

LD50

REMARKS: BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED ACTIVITY).

BEHAVIORAL: CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD. LUNGS, THORAX, OR RESPIRATION: CYANOSIS.

INHALATION

MOUSE

445 mg/m<sup>3</sup>

LC50

REMARKS: SENSE ORGANS AND SPECIAL SENSES (NOSE, EYE, EAR, AND TASTE):EYE: OTHER. LUNGS, THORAX, OR RESPIRATION: STRUCTURAL OR FUNCTIONAL CHANGE IN TRACHEA OR BRONCHI. LIVER: LIVER FUNCTION TESTS IMPAIRED.

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

DATA NOT YET AVAILABLE.

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

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION  
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  
PROPER SHIPPING NAME: OXIDIZING SOLID, N.O.S.  
UN#: 1479  
CLASS: 5.1  
PACKING GROUP: PACKING GROUP III  
HAZARD LABEL: OXIDIZER

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

EU ADDITIONAL CLASSIFICATION  
SYMBOL OF DANGER: O-T+  
INDICATION OF DANGER: OXIDIZING. VERY TOXIC.  
R: 8-25-26-34  
RISK STATEMENTS: CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE  
FIRE. TOXIC IF SWALLOWED. VERY TOXIC BY INHALATION. CAUSES BURNS.  
S: 17-26-28-36/37/39-45  
SAFETY STATEMENTS: KEEP AWAY FROM COMBUSTIBLE MATERIAL. IN CASE  
OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND  
SEEK MEDICAL ADVICE. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY  
WITH PLENTY OF SOAP AND WATER. WEAR SUITABLE PROTECTIVE  
CLOTHING, GLOVES, AND EYE/FACE PROTECTION. IN CASE OF ACCIDENT  
OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE  
LABEL WHERE POSSIBLE).

US CLASSIFICATION AND LABEL TEXT  
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**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.