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## **Material Safety Data Sheet**

Transportation Emergency: 1-800-451-8346

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

CATALOG #: 1300-B-14  
NAME: 3-BROMO-1,1,3,3-TETRAFLUOROPROPENE

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

CAS NUMBER: 460-61-7  
MOLECULAR FORMULA: C<sub>3</sub>HBrF<sub>4</sub>  
MOLECULAR WEIGHT: 192.94

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

#### **LABEL PRECAUTIONARY STATEMENTS**

IRRITANT.  
IRRITATING TO THE EYES, RESPIRATORY SYSTEM AND SKIN.  
RISK OF EXPLOSION IF HEATED UNDER CONFINEMENT.

### **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

NONE.

EXTINGUISHING MEDIA

SUITABLE: WATER SPRAY, ALCOHOL RESISTANT FOAM, DRY CHEMICAL, OR CARBON DIOXIDE. 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-----**

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

EVACUATE AREA. ALLOW GAS TO DISSIPATE.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS, AND HEAVY RUBBER GLOVES. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. BEWARE OF VAPORS ACCUMULATING IN LOWER AREAS.

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. OZONE LAYER DEPLETING MATERIAL.

IF IT IS SAFE TO DO SO, LOCATE AND SHUT OFF THE SOURCE OF THE LEAKING LIQUID OR GAS. PROPERLY LABEL THE DEFECTIVE CYLINDER, ISOLATE IT AND PREPARE TO RETURN IT TO THE MANUFACTURER IN ACCORDANCE WITH ALL APPLICABLE SHIPPING REGULATIONS. VENTILATE AREA.

COLLECTION

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.

PRESSURIZED CONTAINER: PROTECT FROM SUNLIGHT AND DO NOT EXPOSE TO TEMPERATURES EXCEEDING 50 °C. DO NOT PIERCE OR BURN, EVEN AFTER USE.

FIRE OR INTENSE HEAT MAY CAUSE VIOLENT RUPTURE.

STORAGE

SUITABLE: STORE IN TIGHTLY CLOSED, AIRTIGHT, MOISTURE-PROOF CYLINDERS OR TANKS IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM HEAT, SOURCES OF IGNITION, AND SPARKS. PROTECT THE PRESSURIZED CONTAINERS FROM PHYSICAL DAMAGE.

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

**ENGINEERING CONTROLS**

SAFETY SHOWER AND EYE BATH. HIGHLY EFFECTIVE EXHAUST REQUIRED.

**PERSONAL PROTECTIVE EQUIPMENT**

RESPIRATORY: USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 166) 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.

EYE: CHEMICAL SAFETY GOGGLES.

**GENERAL HYGIENE MEASURES**

WASH THOROUGHLY AFTER HANDLING.

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

**APPEARANCE AND ODOR**

LOW BOILING LIQUID.

**PHYSICAL PROPERTIES**

BOILING POINT: 33.4 – 33.6 °C

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

**STABILITY**

STABLE: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS, ACTIVE METALS, STRONG ACIDS AND BASES.

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

**HAZARDOUS DECOMPOSITION PRODUCTS**

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES, HYDROGEN BROMIDE GAS, HYDROGEN FLUORIDE.

**HAZARDOUS POLYMERIZATION**

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

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

**ROUTE OF EXPOSURE**

INHALATION: MAY BE HARMFUL IF INHALED. IRRITATING TO THE RESPIRATORY TRACT.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

SKIN: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION.

EYES: CAUSES EYE IRRITATION.

**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 -----**

DATA 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 -----**

UNRESTRICTED

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

EU ADDITIONAL CLASSIFICATION

SYMBOL OF DANGER: Xi

INDICATION OF DANGER: IRRITANT.

RISK STATEMENTS: 36/37/38-44

SAFETY STATEMENTS: 9-23-24/25-26-36/37/39-38-45-47

UNITED STATES REGULATORY INFORMATION

TSCA: NOT 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.