

# **Material Safety Data Sheet**

Transportation Emergency: 1-800-451-8346

Date last revised: January 16, 2013 Date printed: January 16, 2013

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

CATALOG #: 1100-A-03

NAME: TRIBROMOFLUOROMETHANE

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

CAS NUMBER: 353-54-8

MOLECULAR FORMULA: CBr<sub>3</sub>F MOLECULAR WEIGHT: 270.72

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

LABEL PRECAUTIONARY STATEMENTS

IRRITANT.

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.

DANGEROUS FOR THE OZONE LAYER.

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.

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 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**

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. STORE IN COOL PLACE. 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

LIQUID.

PHYSICAL PROPERTIES

MELTING POINT: -74.5 °C BOILING POINT: 106 - 107 °C

DENSITY: 2.7648 g/ml @ 20 °C REFRACTIVE INDEX: 1.5244 @ 20 °C

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

#### **STABILITY**

STABLE: STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS.

CONDITIONS TO AVOID: HEAT, FLAMES AND SPARKS, EXTREMES OF TEMPERATURE,

MOISTURE AND DIRECT SUNLIGHT.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES, HYDROGEN FLUORIDE,

HYDROGEN BROMIDE GAS.

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 -----

DANGEROUS FOR THE OZONE LAYER.

#### 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

UNRESTRICTED.

**IATA** 

UN NUMBER: 3082 – CLASS: 9 – PACKING GROUP: III

**IMDG** 

UN NUMBER: 3082 – CLASS: 9 – PACKING GROUP: III

# SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER: Xi, N
INDICATION OF DANGER: IRRITANT. DANGEROUS FO THE OZONE LAYER.
RISK STATEMENTS: 36/37/38-59
SAFETY STATEMENTS: 23-24/25-26-36/37/39-45-61
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.