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## SAFETY DATA SHEET

### SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 45102

NAME: 2-Fluorobenzotrifluoride

SYNONYMS: 1-Fluoro-2-(trifluoromethyl)benzene

 $\alpha,\alpha,\alpha,2$ -Tetrafluorotoluene

24 HOUR EMERGENCY

TELEPHONE:

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### SECTION 2. HAZARDS IDENTIFICATION

#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) FLAMMABLE LIQUIDS (CATEGORY 2), H225 SKIN CORROSION/IRRITATION (CATEGORY 2), H315

EYE DAMAGE/IRRITATION (CATEGORY 2A), H319

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

#### GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

**PICTOGRAM** 

SIGNAL WORD DANGER

#### **HAZARD STATEMENT(S)**

H225 HIGHLY FLAMMABLE LIQUID AND VAPOUR.

H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

#### PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT

SURFACES. NO SMOKING.

P233 KEEP CONTAINER TIGHTLY CLOSED.

P240 GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.

P241 USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/

LIGHTING EQUIPMENT.

P242 USE ONLY NON-SPARKING TOOLS.

P243 TAKE PRECAUTIONARY MEASURES AGAINST STATIC

DISCHARGE.

P264 WASH SKIN THOROUGHLY AFTER HANDLING.

P280 WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE

PROTECTION.

P302 + P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.

P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL

MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND

EASY TO DO. CONTINUE RINSING.

P332 + P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/

ATTENTION.

P337 + P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/

ATTENTION.

P362 TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE

REUSE.

P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED

WASTE DISPOSAL PLANT.

HAZARDS NOT NONE

**OTHERWISE** 

CLASSIFIED (HNOC) OR NOT COVERED

**BY GHS** 

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:  $C_7H_4F_4$ 

MW: 164.10

CAS-NO. 392-85-8

PURITY:  $\geq$  98% (GC)

#### **HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION				
2-Fluorobenzotrifluoride						
	-	-				

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

#### SECTION 4. FIRST-AID MEASURES

#### **DESCRIPTION OF FIRST AID MEASURES**

**GENERAL ADVICE** CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA

SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT

OF DANGEROUS AREA.

IF INHALED REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A

> POSITION COMFORTABLE FOR BREATHING. GET MEDICAL ADVICE/ATTENTION IF YOU FEEL UNWELL.

IN CASE OF SKIN REMOVE/TAKE OFF IMMEDIATELY ALL

CONTAMINATED CLOTHING. GENTLY WASH WITH **CONTACT** 

> PLENTY OF SOAP AND WATER. IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION.

RINSE CAUTIOUSLY WITH WATER FOR SEVERAL IN CASE OF EYE

CONTACT MINUTES. REMOVE CONTACT LENSES, IF PRESENT

AND EASY TO DO. CONTINUE RINSING. IF EYE

IRRITATION PERSISTS: GET MEDICAL

ADVICE/ATTENTION.

IF SWALLOWED GET MEDICAL ADVICE/ATTENTION IF YOU FEEL

UNWELL. RINSE MOUTH.

ACUTE: REDNESS. MOST IMPORTANT

**SYMPTOMS AND** THE MOST IMPORTANT KNOWN SYMPTOMS AND

EFFECTS, BOTH ACUTE EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

AND DELAYED SECTION 2.2) AND/OR IN SECTION 11.

INDICATION OF ANY NO DATA AVAILABLE

IMMEDIATE MEDICAL ATTENTION AND SPECIAL

TREATMENT NEEDED

#### SECTION 5. FIRE AND EXPLOSION DATA

**EXTINGUISHING MEDIA** 

SUITABLE SUITABLE EXTINGUISHING MEDIA:

EXTINGUISHING MEDIA DRY CHEMICAL, FOAM, WATER SPRAY, CARBON

DIOXIDE.

UNSUITABLE EXTINGUISHING MEDIA:

SOLID STREAMS OF WATER

SPECIAL HAZARDS ARISING FROM THE

SUBSTANCE OR MIXTURE

CARBON OXIDES HALOGENATED COMPOUNDS

ADVICE FOR FIREFIGHTERS

WEAR SELF-CONTAINED BREATHING APPARATUS IF

POSSIBLE.

**FURTHER INFORMATION** WARNI

WARNING: HIGHLY TOXIC HF GAS IS PRODUCED

DURING COMBUSTION.

TAKE CARE AS IT MAY DECOMPOSE UPON COMBUSTION OR IN HIGH TEMPERATURES TO

GENERATE POISONOUS FUME.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES USE EXTRA PERSONAL PROTECTIVE EQUIPMENT (SELF-CONTAINED BREATHING APPARATUS). KEEP PEOPLE AWAY FROM AND UPWIND OF SPILL/LEAK. ENSURE ADEQUATE VENTILATION. ENTRY TO NON-INVOLVED PERSONNEL SHOULD BE CONTROLLED AROUND THE LEAKAGE AREA BY ROPING OFF, ETC.

ENVIRONMENTAL PRECAUTIONS

PREVENT PRODUCT FROM ENTERING DRAINS.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP ABSORB SPILLED MATERIAL IN DRY SAND OR INERT ABSORBENT BEFORE RECOVERING IT INTO AN AIRTIGHT CONTAINER. IN CASE OF LARGE AMOUNT OF SPILLAGE, CONTAIN A SPILL BY BUNDING. ADHERED OR COLLECTED MATERIAL SHOULD BE PROMPTLY DISPOSED OF, IN ACCORDANCE WITH APPROPRIATE

LAWS AND REGULATIONS.

REFERENCE TO OTHER SECTIONS

FOR DISPOSAL SEE SECTION 13.

#### SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

HANDLING IS PERFORMED IN A WELL VENTILATED PLACE. WEAR SUITABLE PROTECTIVE EQUIPMENT. PREVENT GENERATION OF VAPOUR OR MIST. KEEP AWAY FROM HEAT/SPARKS/OPEN FLAME/HOT SURFACES. -NO SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. USE EXPLOSION-PROOF EQUIPMENT. WASH HANDS AND FACE THOROLIGHLY AFTER HANDLING.

AND FACE THOROUGHLY AFTER HANDLING. USE A CLOSED SYSTEM IF POSSIBLE. USE A VENTILATION, LOCAL EXHAUST IF VAPOUR OR

AEROSOL WILL BE GENERATED.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL, DARK AND WELL-VENTILATED PLACE.

STORE AWAY FROM INCOMPATIBLE MATERIALS SUCH

AS OXIDIZING AGENTS.

Store at 2 - 8 °C

SPECIFIC END USE(S)

**SECTION 8.** 

APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED.

## CONTROL PARAMETERS

#### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **EXPOSURE CONTROLS**

**APPROPRIATE** FOLLOW SAFE INDUSTRIAL

**ENGINEERING** ENGINEERING/LABORATORY PRACTICES WHEN

CONTROLS HANDLING ANY CHEMICAL. INSTALL A CLOSED SYSTEM

OR LOCAL EXHAUST. ALSO INSTALL SAFETY SHOWER

AND EYE BATH.

#### PERSONAL PROTECTIVE EQUIPMENT

**EYE/FACE PROTECTION** FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT

FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS

NIOSH (US) OR EN 166(EU).

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED SKIN PROTECTION

> PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER

SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND

GOOD LABORATORY PRACTICES. WASH AND DRY

HANDS.

**BODY PROTECTION** IMPERVIOUS CLOTHING, FLAME RETARDANT

> ANTISTATIC PROTECTIVE CLOTHING. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED

ACCORDING TO THE CONCENTRATION AND AMOUNT OF

THE DANGEROUS SUBSTANCE AT THE SPECIFIC

WORKPLACE.

VAPOR RESPIRATOR. FOLLOW LOCAL AND NATIONAL RESPIRATORY

**PROTECTION** REGULATIONS.

**CONTROL OF ENVIRONMENTAL** 

**EXPOSURE** 

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO

DO SO. DO NOT LET PRODUCT ENTER DRAINS.

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

#### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Colorless to light yellow to light orange clear liquid

ODOUR NO DATA AVAILABLE ODOUR THRESHOLD NO DATA AVAILABLE PH NO DATA AVAILABLE

MELTING -49 °C

POINT/FREEZING POINT

INITIAL BOILING POINT 116 °C

AND BOILING RANGE

FLASH POINT 17 °C

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR

EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY 1.31

WATER SOLUBILITY NO DATA AVAILABLE PARTITION COEFFICIENT: NO DATA AVAILABLE

N- OCTANOL/WATER

**AUTO-IGNITION** NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION NO DATA AVAILABLE

**TEMPERATURE** 

VISCOSITY

NO DATA AVAILABLE
EXPLOSIVE PROPERTIES

NO DATA AVAILABLE

OXIDIZING PROPERTIES

NO DATA AVAILABLE

#### OTHER SAFETY INFORMATION

NO DATA AVAILABLE

#### SECTION 10. STABILITY AND REACTIVITY

**REACTIVITY** NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE

CONDITIONS.

POSSIBILITY OF HAZARDOUS REACTIONS NO SPECIAL REACTIVITY HAS BEEN REPORTED.

**CONDITIONS TO AVOID** SPARK, OPEN FLAME, STATIC DISCHARGE

INCOMPATIBLE MATERIALS

**OXIDIZING AGENTS** 

HAZARDOUS DECOMPOSITION PRODUCTS CARBON DIOXIDE, CARBON MONOXIDE, HYDROGEN

FLUORIDE

#### SECTION 11. TOXICOLOGICAL INFORMATION

#### INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY NO DATA AVAILABLE

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN** NO DATA AVAILABLE

**CORROSION/IRRITATION** 

SERIOUS EYE NO DATA AVAILABLE

DAMAGE/EYE IRRITATION

**RESPIRATORY OR SKIN** NO DATA AVAILABLE

SENSITISATION

**GERM CELL** MUTAGENICITY NO DATA AVAILABLE

CARCINOGENICITY

NO COMPONENT OF THIS PRODUCT PRESENT AT IARC:

LEVELS GREATER THAN OR EQUAL TO 0.1% IS

IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED

HUMAN CARCINOGEN BY IARC.

NTP: NO COMPONENT OF THIS PRODUCT PRESENT AT

> LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED

CARCINOGEN BY NTP.

OSHA: NO COMPONENT OF THIS PRODUCT PRESENT AT

> LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

TOXICITY - SINGLE

**EXPOSURE** 

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN

**TOXICITY - REPEATED** 

**EXPOSURE** 

NO DATA AVAILABLE

ASPIRATION HAZARD NO DATA AVAILABLE

ADDITIONAL

**INFORMATION** 

RTECS: NOT AVAILABLE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE

NOT BEEN THOROUGHLY INVESTIGATED.

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

TOXICITY NO DATA AVAILABLE

PERSISTENCE AND **DEGRADABILITY** 

NO DATA AVAILABLE

**BIOACCUMULATIVE** 

**POTENTIAL** 

NO DATA AVAILABLE

MOBILITY IN SOIL NO DATA AVAILABLE

RESULTS OF PBT AND VPVB NO DATA AVAILABLE

ASSESSMENT

#### OTHER ADVERSE EFFECTS NO DATA AVAILABLE

#### SECTION 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**PRODUCT** OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO

A LICENSED DISPOSAL COMPANY. BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE

TO DISPOSE OF THIS MATERIAL.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

#### **SECTION 14.** TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: FLAMMABLE LIQUID, N.O.S (2-Fluorobenzotrifluoride)

UN NUMBER: 1993 CLASS: 3 PACKING GROUP: II

**IMDG** 

PROPER SHIPPING NAME: FLAMMABLE LIQUID, N.O.S (2-Fluorobenzotrifluoride)

UN NUMBER: 1993 CLASS: 3 PACKING GROUP: II EMS-NO: F-E, S-E

**IATA** 

PROPER SHIPPING NAME: FLAMMABLE LIQUID, N.O.S (2-Fluorobenzotrifluoride)

UN NUMBER: 1993 CLASS: 3 PACKING GROUP: II

#### SECTION 15. REGULATORY INFORMATION

**SARA 302 COMPONENTS** NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE

REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL

COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS-NO. REVISION DATE

2-Fluorobenzotrifluoride 392-85-8

**NEW JERSEY RIGHT TO KNOW COMPONENTS** 

CAS-NO. REVISION DATE

2-Fluorobenzotrifluoride 392-85-8

#### SECTION 16. OTHER INFORMATION

#### FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H225 HIGHLY FLAMMABLE LIQUID AND VAPOUR.

H315 CAUSES SKIN IRRITATION.

H319 CAUSES SERIOUS EYE IRRITATION.

MSDS LEGEND

MW: MOLECULAR WEIGHT MF: MOLECULAR FORMULA

VOC: VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENENTAL

INDUSTRIAL HYGINISTS

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER

OSHA: OCCUPATIONAL SAFETY AND HEALTH

ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA) TLV: THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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