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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

| | |
|---------------------------------|---|
| CATALOG #: | 45084 |
| NAME: | 3,4-Difluorobenzotrifluoride |
| SYNONYMS: | $\alpha,\alpha,\alpha,3,4$ -Pentafluorotoluene |
| 24 HOUR EMERGENCY TELEPHONE: | (800) 535-5053(USA) 352-323-3500 (INTERNATIONAL) |
| TO REQUEST AN MSDS: | (800) 869-9290 |
| CUSTOMER SERVICE: | (630) 766-2112 |

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)
FLAMMABLE LIQUIDS (CATEGORY 3), H226
SKIN CORROSION/IRRITATION (CATEGORY 2), H315
EYE DAMAGE/IRRITATION (CATEGORY 2A), H319

MW: 182.09
CAS-NO. 32137-19-2
PURITY: $\geq 97\%$ (GC)

HAZARDOUS COMPONENTS

| COMPONENT | CLASSIFICATION | CONCENTRATION |
|------------------------------|----------------|---------------|
| 3,4-Difluorobenzotrifluoride | | |
| | - | - |

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 CONTACT REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. GENTLY WASH WITH PLENTY OF SOAP AND WATER. IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION.

IN CASE OF EYE CONTACT RINSE CAUTIOUSLY WITH WATER FOR SEVERAL 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.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED ACUTE: REDNESS. THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA**SUITABLE
EXTINGUISHING MEDIA**

SUITABLE 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

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

FOLLOW SAFE INDUSTRIAL ENGINEERING/LABORATORY PRACTICES WHEN 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).

| | |
|--|--|
| SKIN PROTECTION | HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED 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. |
| RESPIRATORY PROTECTION | VAPOR RESPIRATOR. FOLLOW LOCAL AND NATIONAL 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 POINT/FREEZING POINT | |
| INITIAL BOILING POINT AND BOILING RANGE | 102 °C |
| FLASH POINT | 25 °C |
| EVAPORATION RATE | NO DATA AVAILABLE |
| FLAMMABILITY (SOLID, GAS) | NO DATA AVAILABLE |
| UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS | NO DATA AVAILABLE |
| VAPOUR PRESSURE | NO DATA AVAILABLE |
| VAPOUR DENSITY | NO DATA AVAILABLE |
| RELATIVE DENSITY | 1.41 |
| WATER SOLUBILITY | NO DATA AVAILABLE |
| PARTITION COEFFICIENT: N- OCTANOL/WATER | NO DATA AVAILABLE |
| AUTO-IGNITION TEMPERATURE | NO DATA AVAILABLE |

| | |
|---------------------------|-------------------|
| DECOMPOSITION TEMPERATURE | NO DATA AVAILABLE |
| 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 CORROSION/IRRITATION | NO DATA AVAILABLE |
| SERIOUS EYE DAMAGE/EYE IRRITATION | NO DATA AVAILABLE |

| | |
|---|---|
| RESPIRATORY OR SKIN SENSITISATION | NO DATA AVAILABLE |
| GERM CELL MUTAGENICITY | NO DATA AVAILABLE |
| CARCINOGENICITY | |
| IARC: | NO COMPONENT OF THIS PRODUCT PRESENT AT 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 ASSESSMENT**

NO DATA AVAILABLE

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 LIQUIDS, N.O.S (3,4-Difluorobenzotrifluoride)
UN NUMBER: 1993
CLASS: 3
PACKING GROUP: III

IMDG

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, N.O.S (3,4-Difluorobenzotrifluoride)
UN NUMBER: 1993
CLASS: 3
PACKING GROUP: III
EMS-NO: F-E, S-E

IATA

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, N.O.S (3,4-Difluorobenzotrifluoride)
UN NUMBER: 1993
CLASS: 3
PACKING GROUP: III

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 |
|------------------------------|------------|---------------|
| 3,4-Difluorobenzotrifluoride | 32137-19-2 | |

NEW JERSEY RIGHT TO KNOW COMPONENTS

| | CAS-NO. | REVISION DATE |
|------------------------------|------------|---------------|
| 3,4-Difluorobenzotrifluoride | 32137-19-2 | |

SECTION 16. OTHER INFORMATION

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

| | |
|------|--------------------------------|
| H226 | FLAMMABLE LIQUID AND VAPOR |
| 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 GOVERNMENTAL INDUSTRIAL HYGINISTS |
| CAS: | CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER |
| OSHA: | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION |
| PEL: | PERMISSIBLE EXPOSURE LIMIT (OSHA) |
| TLV: | THRESHOLD LIMIT VALUE (ACGIH) |

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VERSION: 3.2.

REVISION DATE: 10/1/2021