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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 45077

NAME: 2,4-Dichlorobenzotrifluoride

SYNONYMS: 1,3-Dichloro-4-(trifluoromethyl)benzene
2,4-Dichloro- α,α,α -trifluorotoluene

24 HOUR EMERGENCY
TELEPHONE: (800) 535-5053(USA)
352-323-3500 (INTERNATIONAL)

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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 4), H227

SKIN CORROSION (CATEGORY 1B), H314

SERIOUS EYE DAMAGE (CATEGORY 1), H318

LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 4), H413

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)

H227 COMBUSTIBLE LIQUID.
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H413 MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE.

PRECAUTIONARY STATEMENT(S)

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. NO SMOKING.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P273 AVOID RELEASE TO THE ENVIRONMENT.
P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P301 + P330 + P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.
P303 + P361 + P353 IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.
P304 + P340 + P310 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER/DOCTOR.
P305 + P351 + P338 + P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER/DOCTOR.
P363 WASH CONTAMINATED CLOTHING BEFORE REUSE.
P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM TO EXTINGUISH.
P403 + P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P405 STORE LOCKED UP.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:

C₇H₃Cl₂F₃

MW: 215.00
 CAS-NO. 320-60-5
 PURITY: \geq 99% (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
2,4-Dichlorobenzotrifluoride		
	FLAM. LIQ. 4; SKIN CORR. 1B; EYE DAM. 1; AQUATIC CHRONIC 4; H227, H314, H318, H413	\leq 100 %

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	FIRST AIDERS NEED TO PROTECT THEMSELVES. SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.
IF INHALED	AFTER INHALATION: FRESH AIR. CALL IN PHYSICIAN.
IN CASE OF SKIN CONTACT	IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER. CALL A PHYSICIAN IMMEDIATELY.
IN CASE OF EYE CONTACT	AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. IMMEDIATELY CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.
IF SWALLOWED	AFTER SWALLOWING: MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST), AVOID VOMITING (RISK OF PERFORATION). CALL A PHYSICIAN IMMEDIATELY. DO NOT ATTEMPT TO NEUTRALISE.
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	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
WATER FOAM CARBON DIOXIDE (CO₂) DRY POWDER

UNSUITABLE EXTINGUISHING MEDIA
FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF
EXTINGUISHING AGENTS ARE GIVEN.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

CARBON OXIDES
HYDROGEN CHLORIDE GAS
HYDROGEN FLUORIDE
COMBUSTIBLE.
VAPORS ARE HEAVIER THAN AIR AND MAY SPREAD
ALONG FLOORS.
FORMS EXPLOSIVE MIXTURES WITH AIR ON INTENSE
HEATING.
DEVELOPMENT OF HAZARDOUS COMBUSTION GASES OR
VAPOURS POSSIBLE IN THE EVENT OF FIRE.

ADVICE FOR FIREFIGHTERS

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED
BREATHING APPARATUS. PREVENT SKIN CONTACT BY
KEEPING A SAFE DISTANCE OR BY WEARING SUITABLE
PROTECTIVE CLOTHING.

FURTHER INFORMATION

REMOVE CONTAINER FROM DANGER ZONE AND COOL
WITH WATER. SUPPRESS (KNOCK DOWN)
GASES/VAPORS/MISTS WITH A WATER SPRAY JET.
PREVENT FIRE EXTINGUISHING WATER FROM
CONTAMINATING SURFACE WATER OR THE GROUND
WATER SYSTEM.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

ADVICE FOR NON-EMERGENCY PERSONNEL: AVOID
GENERATION AND INHALATION OF DUSTS IN ALL
CIRCUMSTANCES. AVOID SUBSTANCE CONTACT. ENSURE
ADEQUATE VENTILATION. EVACUATE THE DANGER AREA,
OBSERVE EMERGENCY PROCEDURES, CONSULT AN
EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL
PRECAUTIONS**

DO NOT LET PRODUCT ENTER DRAINS.

**METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UP**

COVER DRAINS. COLLECT, BIND, AND PUMP OFF SPILLS.
OBSERVE POSSIBLE MATERIAL RESTRICTIONS (SEE
SECTIONS 7 AND 10). CLEAN UP AFFECTED AREA.

**REFERENCE TO OTHER
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

KEEP AWAY FROM OPEN FLAMES, HOT SURFACES AND
SOURCES OF IGNITION. TAKE PRECAUTIONARY MEASURES
AGAINST STATIC DISCHARGE.
IMMEDIATELY CHANGE CONTAMINATED CLOTHING.
APPLY PREVENTIVE SKIN PROTECTION. WASH HANDS AND
FACE AFTER WORKING WITH SUBSTANCE.
FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIES**

TIGHTLY CLOSED.

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**

IMMEDIATELY CHANGE CONTAMINATED CLOTHING. APPLY
PREVENTIVE SKIN PROTECTION. WASH HANDS AND FACE
AFTER WORKING WITH SUBSTANCE.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION	USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). TIGHTLY FITTING SAFETY GOGGLES
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	PROTECTIVE CLOTHING
RESPIRATORY PROTECTION	REQUIRED WHEN DUSTS ARE GENERATED. OUR RECOMMENDATIONS ON FILTERING RESPIRATORY PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER ACCOMPANYING STANDARDS RELATING TO THE USED RESPIRATORY PROTECTION SYSTEM.
CONTROL OF ENVIRONMENTAL EXPOSURE	DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Colorless to almost colorless 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	117 - 118 °C
FLASH POINT	72 °C
EVAPOURATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	1.47 HPA AT 25 °C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.49
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	FORMS EXPLOSIVE MIXTURES WITH AIR ON INTENSE HEATING. A RANGE FROM APPROX. 15 KELVIN BELOW THE FLASH POINT IS TO BE RATED AS CRITICAL.
CHEMICAL STABILITY	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	VIOLENT REACTIONS POSSIBLE WITH: STRONG OXIDIZING AGENTS BASES
CONDITIONS TO AVOID	STRONG HEATING.
INCOMPATIBLE MATERIALS	NO DATA AVAILABLE
HAZARDOUS DECOMPOSITION PRODUCTS	IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY	LD50 ORAL - RAT - 2,150 MG/KG REMARKS: BEHAVIORAL: SOMNOLENCE (GENERAL DEPRESSED ACTIVITY). BEHAVIORAL: TREMOR. LUNGS, THORAX, OR RESPIRATION: DYSPNEA. (RTECS)
	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	TEST TYPE: AMES TEST TEST SYSTEM: S. TYPHIMURIUM METABOLIC ACTIVATION: WITH AND WITHOUT METABOLIC ACTIVATION METHOD: OECD TEST GUIDELINE 471 RESULT: NEGATIVE
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**

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN, SPASM, INFLAMMATION AND EDEMA OF THE LARYNX, SPASM, INFLAMMATION AND EDEMA OF THE BRONCHI, PNEUMONITIS, PULMONARY EDEMA, BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

OTHER DANGEROUS PROPERTIES CAN NOT BE EXCLUDED.

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - > 0.18 MG/L - 48 H (OECD TEST GUIDELINE 202)
PERSISTENCE AND DEGRADABILITY	NO DATA AVAILABLE
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
MOBILITY IN SOIL	NO DATA AVAILABLE
RESULTS OF PBT AND VPVB ASSESSMENT	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED.
OTHER ADVERSE EFFECTS	WE HAVE NO QUANTITATIVE DATA CONCERNING THE ECOLOGICAL EFFECTS OF THIS PRODUCT. FURTHER INFORMATION ON ECOLOGY DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL CONTAINERS. NO MIXING WITH OTHER WASTE.

CONTAMINATED PACKAGING DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)
PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,4-Dichlorobenzotrifluoride)
UN NUMBER: 3265
CLASS: 8
PACKING GROUP: II
REPORTABLE QUANTITY (RQ):
POISON INHALATION HAZARD: NO

IMDG
PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,4-Dichlorobenzotrifluoride)
UN NUMBER: 3265
CLASS: 8
PACKING GROUP: II
EMS-NO: F-A, S-B

IATA
PROPER SHIPPING NAME: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,4-Dichlorobenzotrifluoride)
UN NUMBER: 3265
CLASS: 8
PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

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.

SARA 311/312 HAZARDS FIRE HAZARD, ACUTE HEALTH HAZARD

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
2,4-Dichlorobenzotrifluoride	320-60-5	

NEW JERSEY RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
2,4-Dichlorobenzotrifluoride	320-60-5	

SECTION 16. OTHER INFORMATION

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

H227	COMBUSTIBLE LIQUID.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H413	MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE.

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)

IMPORTANT:

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