

# *Chem-Impex International Inc.*

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825 Dillon Drive  
Wood Dale, IL 60191 USA

## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #: 45718

NAME: 2-Chlorobenzotrifluoride

SYNONYMS: 1-Chloro-2-(trifluoromethyl)benzene  
2-Chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene

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

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#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

FLAMMABLE LIQUIDS (CATEGORY 3), H226  
ACUTE TOXICITY, ORAL (CATEGORY 4), H302  
SKIN IRRITATION (CATEGORY 2), H315  
EYE IRRITATION (CATEGORY 2A), H319

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3), RESPIRATORY SYSTEM, H335

SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 3), H402

LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 3), H412

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

### GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD

WARNING

HAZARD STATEMENT(S)

H226	FLAMMABLE LIQUID AND VAPOR.
H302	HARMFUL IF SWALLOWED.
H315	CAUSES SKIN IRRITATION.
H319	CAUSES SERIOUS EYE IRRITATION.
H335	MAY CAUSE RESPIRATORY IRRITATION.
H412	HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

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.
P261	AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPORS/ SPRAY.
P264	WASH SKIN THOROUGHLY AFTER HANDLING.
P270	DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P271	USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P273	AVOID RELEASE TO THE ENVIRONMENT.
P280	WEAR EYE PROTECTION/ FACE PROTECTION.
P301 + P312 + P330	IF SWALLOWED: CALL A POISON CENTER/ DOCTOR IF YOU FEEL UNWELL. RINSE MOUTH.
P303 + P361 + P353	IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.
P304 + P340 + P312	IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. CALL A POISON CENTER/ DOCTOR IF YOU FEEL UNWELL.
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.

P370 + P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM TO EXTINGUISH.

P403 + P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

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

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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MF:  $C_7H_4ClF_3$

MW: 180.55

CAS-NO. 88-16-4

PURITY:  $\geq 98\%$  (GC)

#### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
<b>2-Chlorobenzotrifluoride</b>		
	FLAM. LIQ. 3; ACUTE TOX. 4; SKIN IRRIT. 2; EYE IRRIT. 2A; STOT SE 3; AQUATIC ACUTE 3; AQUATIC CHRONIC 3; H226, H302, H315, H319, H335, H402, H412	$\leq 100\%$

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

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### SECTION 4. FIRST-AID MEASURES

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#### DESCRIPTION OF FIRST AID MEASURES

**GENERAL ADVICE** SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

**IF INHALED** AFTER INHALATION: FRESH AIR.

<b>IN CASE OF SKIN CONTACT</b>	IN CASE OF SKIN CONTACT: TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER.
<b>IN CASE OF EYE CONTACT</b>	AFTER EYE CONTACT: RINSE OUT WITH PLENTY OF WATER. CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.
<b>IF SWALLOWED</b>	AFTER SWALLOWING: IMMEDIATELY MAKE VICTIM DRINK WATER (TWO GLASSES AT MOST). CONSULT A PHYSICIAN
<b>MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED</b>	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.
<b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b>	NO DATA AVAILABLE

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## **SECTION 5. FIRE AND EXPLOSION DATA**

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### **EXTINGUISHING MEDIA**

<b>SUITABLE EXTINGUISHING MEDIA</b>	SUITABLE EXTINGUISHING MEDIA WATER FOAM CARBON DIOXIDE (CO2) DRY POWDER
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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.  
RISK OF DUST EXPLOSION.  
FORMS EXPLOSIVE MIXTURES WITH AIR AT ELEVATED TEMPERATURES.  
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.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES** ADVICE FOR NON-EMERGENCY PERSONNEL: DO NOT BREATHE VAPORS, AEROSOLS. AVOID SUBSTANCE CONTACT. ENSURE ADEQUATE VENTILATION. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION. EVACUATE THE DANGER AREA, OBSERVE EMERGENCY PROCEDURES, CONSULT AN EXPERT.

FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL PRECAUTIONS** DO NOT LET PRODUCT ENTER DRAINS. RISK OF EXPLOSION.

**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). DISPOSE OF PROPERLY. CLEAN UP AFFECTED AREA.

**REFERENCE TO OTHER SECTIONS** FOR DISPOSAL SEE SECTION 13.

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## **SECTION 7. HANDLING AND STORAGE**

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**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** KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. KEEP AWAY FROM HEAT AND SOURCES OF IGNITION.

Store at 2 - 8 °C

**SPECIFIC END USE(S)**

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

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

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**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). SAFETY GLASSES

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

FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING.

RESPIRATORY PROTECTION

REQUIRED WHEN VAPOURS/AEROSOLS 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. RISK OF EXPLOSION.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Colorless to light yellow clear liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	-7.4 °C
INITIAL BOILING POINT AND BOILING RANGE	153 °C
FLASH POINT	59 °C
EVAPOURATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	LOWER EXPLOSION LIMIT: 1.7 %(V)
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.37
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

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**SECTION 10. STABILITY AND REACTIVITY**

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<b>REACTIVITY</b>	VAPOR/AIR-MIXTURES ARE EXPLOSIVE AT INTENSE WARMING.
<b>CHEMICAL STABILITY</b>	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS.
<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	VIOLENT REACTIONS POSSIBLE WITH: BASES STRONG OXIDIZING AGENTS
<b>CONDITIONS TO AVOID</b>	HEATING.
<b>INCOMPATIBLE MATERIALS</b>	VARIOUS PLASTICS

**HAZARDOUS  
DECOMPOSITION  
PRODUCTS**

IN THE EVENT OF FIRE: SEE SECTION 5

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**SECTION 11. TOXICOLOGICAL INFORMATION**

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**INFORMATION ON TOXICOLOGICAL EFFECTS**

**ACUTE TOXICITY**

LD50 ORAL - RAT - 1,600 MG/KG  
REMARKS: (RTECS)SYMPTOMS: IRRITATIONS OF MUCOUS  
MEMBRANES IN THE MOUTH, PHARYNX, OESOPHAGUS  
AND GASTROINTESTINAL TRACT.  
SYMPTOMS: SHORTNESS OF BREATH, COUGH, MUCOSAL  
IRRITATIONS, AFTER A LATENCY PERIOD., INHALATION  
MAY LEAD TO THE FORMATION OF OEDEMAS IN THE  
RESPIRATORY TRACT. POSSIBLE DAMAGES: DAMAGE OF  
RESPIRATORY TRACT

INHALATION: NO DATA AVAILABLE

DERMAL: ABSORPTION

NO DATA AVAILABLE

**SKIN  
CORROSION/IRRITATION**

NO DATA AVAILABLE

**SERIOUS EYE  
DAMAGE/EYE IRRITATION**

LACRIMAL IRRITATION DUE TO VAPOURS.

**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



<b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>	MAY CAUSE RESPIRATORY IRRITATION.
<b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b>	NO DATA AVAILABLE
<b>ASPIRATION HAZARD</b>	NO DATA AVAILABLE
<b>ADDITIONAL INFORMATION</b>	<p>RTECS: NOT AVAILABLE</p> <p>BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, VOMITING, PROLONGED OR REPEATED EXPOSURE CAN CAUSE: LUNG IRRITATION, CHEST PAIN, PULMONARY EDEMA, TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.</p> <p>SYSTEMIC EFFECTS: IF SWALLOWED</p> <p>HEADACHE NAUSEA VOMITING CONVULSIONS UNCONSCIOUSNESS</p> <p>FURTHER DATA: OTHER DANGEROUS PROPERTIES CAN NOT BE EXCLUDED. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.</p>

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**SECTION 12. ECOLOGICAL INFORMATION**

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**TOXICITY**

TOXICITY TO FISH	LC50 - DANIO RERIO (ZEBRA FISH) - 25 - 35 MG/L - 96 H REMARKS: (HOMMEL)
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	EC50 - DAPHNIA MAGNA (WATER FLEA) - 100 - 150 MG/L REMARKS: (HOMMEL)

**PERSISTENCE AND DEGRADABILITY**

<b>BIODEGRADABILITY</b>	RESULT: < 10 % - NOT READILY ELIMINATED FROM WATER. (OECD TEST GUIDELINE 302B)
<b>BIOACCUMULATIVE POTENTIAL</b>	NO DATA AVAILABLE
<b>MOBILITY IN SOIL</b>	NO DATA AVAILABLE
<b>RESULTS OF PBT AND VPVB ASSESSMENT</b>	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED.
<b>OTHER ADVERSE EFFECTS</b>	DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

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### SECTION 13. DISPOSAL CONSIDERATIONS

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#### WASTE TREATMENT METHODS

<b>PRODUCT</b>	WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL CONTAINERS. NO MIXING WITH OTHER WASTE.
<b>CONTAMINATED PACKAGING</b>	DISPOSE OF AS UNUSED PRODUCT.

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### SECTION 14. TRANSPORT INFORMATION

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<b>DOT (US)</b>	
PROPER SHIPPING NAME:	CHLOROBENZOTRIFLUORIDES
UN NUMBER:	2234
CLASS:	3
PACKING GROUP:	III
REPORTABLE QUANTITY (RQ):	
POISON INHALATION HAZARD:	NO

<b>IMDG</b>	
PROPER SHIPPING NAME:	CHLOROBENZOTRIFLUORIDES
UN NUMBER:	2234
CLASS:	3
PACKING GROUP:	III
EMS-NO:	F-E, S-D

**IATA**

PROPER SHIPPING NAME: CHLOROBENZOTRIFLUORIDES  
UN NUMBER: 2234  
CLASS: 3  
PACKING GROUP: III

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**SECTION 15. REGULATORY INFORMATION**

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**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

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
2-Chlorobenzotrifluoride	88-16-4	04-24-1993

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
2-Chlorobenzotrifluoride	88-16-4	04-24-1993

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
2-Chlorobenzotrifluoride	88-16-4	04-24-1993

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**SECTION 16. OTHER INFORMATION**

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

H226 FLAMMABLE LIQUID AND VAPOR.  
H302 HARMFUL IF SWALLOWED.  
H315 CAUSES SKIN IRRITATION.  
H319 CAUSES SERIOUS EYE IRRITATION.  
H335 MAY CAUSE RESPIRATORY IRRITATION.  
H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

**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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