INDEPENDENCE MALL WEST PHILADELPHIA, PA. 19105, U.S.A. TELEPHONE (215) 592-3000
CABLE ADDRESS ROHMHAAS TELEX 845-747 TWX 710-670-9236

7KI-0794-001006

Contains No CBI

ROHM AND HAAS COMPANY

INIT 07/14/94

July 29, 1982

84940000106

Mr. Louis Borghi
Staff Scientist
Dynamic Corporation
The Dynamic Building
11140 Rockville Pike
Rockville, Maryland 20852

Dear Mr. Borghi:

This letter is in response to your request, on behalf of the ITC Committee, for data on the following four chemicals which the Rohm and Haas Company reported for the TSCA Inventory and which were included in the 1982 list of chemicals published by the ITC in the February 25, 1982 Federal Register:

CAS No	Chemical
122-19-0	Benzyldimethyloctadecylammonium chloride
122-99-6	2-phenoxyethanol
328-84-7	3,4-Dichlorobenzotrifluoride
29964-84-9	Isodecyl Methacrylate

The requested data on isodecyl methacrylate and Benzyldimethyloctadecylammonium chloride was forwarded to you with our letter of July 21, 1982 on this subject. We have now completed preparation and internal review on the information packages for the remaining two chemicals, 2-phenoxyethanol and 3,4-dichlorobenzotrifluoride. Three copies of each of these two data packages are enclosed herewith for review by the ITC.

We believe that the data enclosed herewith and with our earlier submittal of July 21, 1982 provide strong arguments against the need for the subject chemicals to be placed on the ITC priority list of chemicals for further testing, and appreicate this opportunity to present our data prior to the ITC's final decision on this subject.

Sincerely,

Ronald L. Keener

Ronald L. Keener
Chemical Standards Manager
Government and Regulatory Affairs Department

Information Package on 3,4-Dichlorobenzotrifluoride (DCBTF)

(CAS No. 328-84-7) for Submittal to the ITC

Submitted by: R. L. Keener, Chemical Standards Manager
Government and Regulatory Affairs Department
Rohm and Haas Company (Corporate Headquarters)
Independence Mall West
Philadelphia, PA 19105

July 29, 1982

I Importation

A. Introduction

3,4-Dichlorobenzotrifluoride (DCBTF) is a raw material imported into the U.S. by the Rohm and Haas Company for use in the manufacture of chemical intermediates at two company locations. The locations of these sites is considered confidential business information. The chemical intermediates are subsequently used to form new chemical products. The intended uses of the final products are considered confidential business information.

B. Use Sites - Confidential Business Information

C. Process Description

A description and flow diagram for the processes involved in the internal uses of DCBTF are presented in Attachment 1.

D. Import Volumes and Trends

Precise import figures for 1981 and future import trends are considered confidential business information The 1981 import volume of DCBTF was less than 10 mil. on pounds.

II Occupational Exposure

A. Type of Process System

As indicated in Attachment 1 most of the operations involved in the storage and internal use of DBCTF are carried out in enclosed processes.

B. No. of Workers Involved

See Attachment 1.

C. Exposures

Attachment 1 describes those operations during internal use where potential exposure to DCBTF could occur. Potential inhalation exposures are minimized by the use of closed processing equipment. Moreover, the potential for skin and eye contact is minimized by the standard administrative requirement for Rohm and Haas workers

to wear protective gloves and eyewear whenever the potential for exposure exists.

III Use Data

A. Internal Use as an Intermediate

During 1981, all of the company's import of DCBTF was used internally in the manufacture of chemical intermediates and thus is essentially completely consumed. These intermediates were subsequently consumed in other chemical reactions to produce chemical products whose intended uses are considered confidential business information.

B. Exports

None.

C. Domestic Sales

None.

D. Consumer Uses

Not applicable. DCBTF is completely consumed at the submitter's sites in the manufacture of new chemical intermediates.

IV Environmental Releases

Environmental releases from storage and use operations are summarized in Attachment 1. As indicated in the Attachment, only small amounts of DCBTF are discharged to air or water during use operations. There are no releases to land.

V Toxicological Data

A summary of the toxicological properties of DCBTF and reports summarizing acute inhalation, oral, dermal and irritation studies on it are presented in Attachment 2 to this report.

VI MSDS

The Rohm and Haas MSDS and a domestic supplier's MSDS are presented as Attachments 5 and 6 to this report.

Attachment 1

Description and Flow Diagram for Processes Using DCBTF

A. Process Descriptions

At the present time DCBTF is imported in drums. At plant A the material is pumped from the drums into a storage tank for use in the one process or into tank wagons for shipment to Plant B for use in other processes.

At Plant Site A, the DCBTF is pumped from the storage tank to a measuring tank in the reaction building. The DCBTF is fed from the measuring tank to the reactor where it undergoes reaction to form an intermediate. Any DCBTF that remains unconverted is removed from the reactor as part of an organic waste stream which is drummed for subsequent burning in the power house.

At Plant Site B, the DCBTF is delivered to the plant site in tank wagons from which it is transferred to a storage tank. From the storage tank the DCBTF is pumped to a measuring tank in the reaction rack. The material is fed from the measuring tank to the reactor where it is processed to form an intermediate. Unreacted DCBTF is recycled in the process. When the recovered DCBTF is unsuitable for further recycle the material will be blended with other waste streams from the process for burning by an outside contractor.

B. Summary of Exposure and Environmental Release Data

Exposure

1 - Block Diagram attached

2 - People, hours, days exposed

	People	Hours	Days
Plant Site A	6	4.5	124
Plant Site B	16	0.3	320

3 - Operations Causing Exposure

a) Sampling DCBTF
b) Pumping DCBTF from drums to tank wagons or storage tank
c) Sampling Reactor
d) Sampling recovered DCBTF
e) Drumming waste
f) Analysis of samples

4 - Exposure Control

A) Process equipment closed
B) Rubber gloves, splash goggles
C) Sample ports at plant site B are in hoods
D) Hoods for analysis

5 - Exposure Route - inhalation
Exposure level - estimated less than 10 ppm average

Environmental

1 - Releases to Air, Land, Water

	Air	Land	Water
Plant Site A	5 lbs/yr	0	450 lbs/yr
Plant Site B	100 lbs/yr	0	0

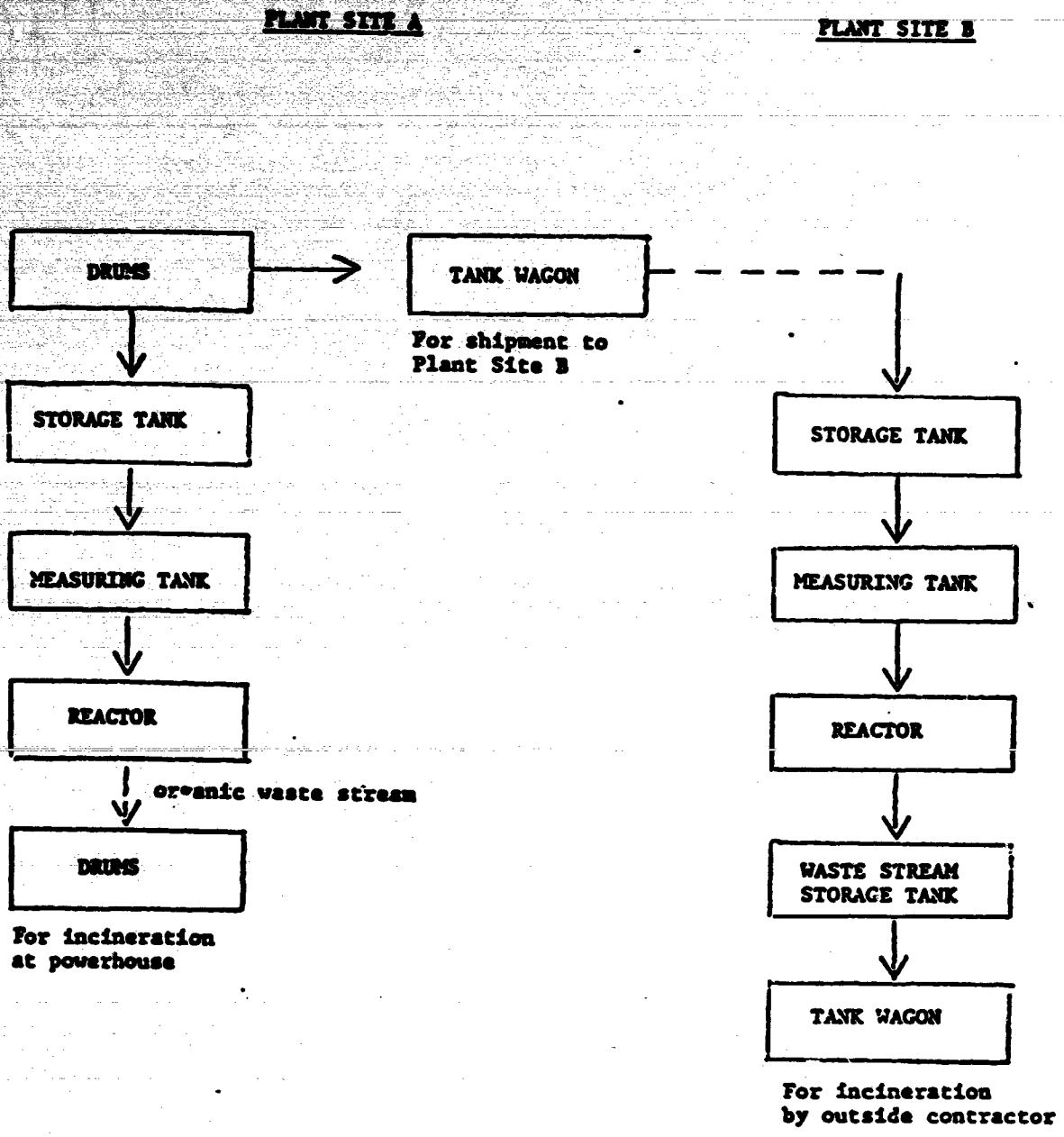
2 - Source of Releases

The air releases are from storage tank vents. The water release is calculated from drum washings to chemical sewer.

3 - Disposal Methods

Incineration of waste streams.

C. Flow Diagram



Attachment 2

Toxicity Data on 3,4-Dichlorobenzotrifluoride (DCBTF)

I Summary

The following toxicity reports have been obtained from a search of company files and included as p rt of this attachment;

1. Rohm and Haas Report #76-126, dated August 3, 1976: 3,4-Dichlorobenzotrifluoride, RH-33,423 (purity not defined)-definitive rat oral and rabbit dermal LD_{50}, rabbit skin and eye irritation.

2. Inhalation Toxicity Report on RH-33,423, dated July 6, 1976, from MB Research Laboratories, Inc.

Results of these tests indicate that 3,4 DCBTF is:

1. Slightly toxic by ingestion in a single dose i.e. LD_{50} = 1.15 (0.87-1.55) g/kg :

2. practically non-toxic by a single dermal application (i.e. $LD_{50} > 5.0$ g/kg);

3. moderately irritating to rabbit skin (primary irritation score = 4.3);

4. slightly irritating to the rabbit eye (conjunctival effects only, all irritation reversible within 72 hours);

5. practically non-toxic by the inhalation route of exposure ($LC_{50} > 5000$ mg/m^3).

II Detailed Reports

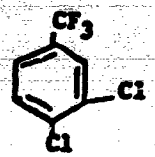
TOXICITY DATA
RESEARCH DIVISION

ROHM & HAAS
PHILADELPHIA, PA 19105

REPORT NO. 26320 DATE August 1976 PAGE 254

PRODUCT: 3,4-Dichlorobenzotrifluoride, (purity not defined)

Attachment 2, p.



TRD NO. 75-187 COMPOUND NO. RH 33,423 DISTRIB. 4

SINGLE ORAL DOSE
TRD PROTOCOL NO. 30
BOOK 1 PAGE 300

SEX Male SPECIES Albino Rat (CF Nelson) LD_{50} 1.15(0.87-1.55) g/kg

CONDITIONS Animals fasted for 24 hours were dosed with the product, as received.

DOSAGE	ONSET OF (S) SIGNS, (D) DEATH, HOURS AND DAYS									DIED	MEAN WT.		TIME OF (R) RECOVERY, DAY						
	0-6	6-24	2	3	4	5	6	7	8-14	DOSED	I	T	1	2	3	4	5	6	7
1. 1.87 g/kg	S	D3	D1	D3		D2				9/10	174	208							
2. 0.94	S	D2	D1							3/10	173	214							
3. 0.47										0/10	176	260							
4. 0.24										0/10	172	260							

SIGNS OF INTOXICATION Salivation, chromorhinitis, tremors, lethargy, body rigidity, diarrh

GROSS AUTOPSY Decedents - lungs hemorrhagic; livers darkened.
Survivors - Normal.

SINGLE PARENTERAL DOSE
TRD PROTOCOL NO.
BOOK PAGE

SEX SPECIES LD_{50}

CONDITIONS

DOSAGE	ONSET OF (S) SIGNS, (D) DEATH, HOURS AND DAYS									DIED	MEAN WT.		TIME OF (R) RECOVERY, DAY						
	0-6	6-24	2	3	4	5	6	7	8-14	DOSED	I	T	1	2	3	4	5	6	7
1.																			
2.																			
3.																			
4.																			

SIGNS OF INTOXICATION

GROSS AUTOPSY

SINGLE DERMAL DOSE
TRD PROTOCOL NO. 31
BOOK 7 PAGE 146

SEX Male SPECIES Albino Rabbit LD_{50} Greater than 5.0 g/kg

CONDITIONS The product, as received, was held under an impervious cuff in continuous 24-hr. contact with the closely shaven skin.

DOSAGE	ONSET OF (S) SIGNS, (D) DEATH, HOURS AND DAYS									DIED	MEAN WT.		TIME OF (R) RECOVERY, DAYS						
	0-6	6-24	2	3	4	5	6	7	8-14	DOSED	I	T	1	2	3	4	5	6	7-14
1. 5.0 g/kg				S			D1			1/5	2.53	2.89							
2.																			
3.																			
4.																			

SIGNS OF INTOXICATION Diarrhea.

SKIN IRRITATION Slight to well defined erythema, slight edema.

GROSS AUTOPSY Survivors - Normal.

SINGLE INHALATION TRD PROTOCOL NO. _____ BOOK _____ PAGE _____ SEX _____ LC_{50} _____ CONDITIONS _____

CHAMBER CONCENTRATION	ONSET OF (S) SIGNS, (D) DEATH, MIN. AND HOURS										DIED DOSED	MEAN WT.		DAYS TO DEATH OR RECOVERY						
	0-15	15-30	30-60	1	2	3	4	5	6	7		1	2	0	1	2	3	4	5	6-14
1.																				
2.																				
3.																				
4.																				

SIGNS OF INTOXICATION

GROSS AUTOPSY

RABBIT SKIN IRRITATION TRD PROTOCOL NO. 19 BOOK 4 PAGE 144

CONDITIONS 0.5 ml of the product, as received, was held under an impervious patch in continuous 24-hour contact with the closely shaven skin.

TIME, HOURS	REACTION	RABBIT NUMBER, VALUE						MEAN VALUE
		1	2	3	4	5	6	
	ERYTHEMA							
24	INTACT	2		2	2	2	2	2
72	INTACT	2		2	2	2	2	2
24	ABRADED	2	2	2	2	2	2	2
72	ABRADED	2	2	2	2	2	2	2
	EDEMA							
24	INTACT	4	4	4	4	4	4	4
72	INTACT	0	0	0	0	0	0	0
24	ABRADED	4	4	4	4	4	4	4
72	ABRADED	0	0	0	2	2	4	1.3

WAS STRUCTURE OF THE TISSUE AT THE SITE OF CONTACT DESTROYED OR CHANGED IRREVERSIBLY IN 24 HOURS OR LESS? YES ☐ NO ☒

THE SCORING SYSTEM USED HEREIN FOR SKIN AND EYE IRRITATION REACTIONS IS THAT OF DRAIZE, J.H., WOODWARD, G., AND CALVERY, H.O.: J.PHARMACOL. EXPTL. THERAP., 82:377, 1944. THE MAXIMUM POSSIBLE VALUE FOR A SKIN REACTION (EXCLUDING NECROSIS) IS 4. THE "PRIMARY IRRITATION SCORE" IS THE SUM OF THE MEAN VALUES DIVIDED BY 4. THE MAXIMUM POSSIBLE SCORES FOR EYE IRRITATION REACTIONS (AGAIN EXCLUDING NECROSIS) ARE: CORNEA, 80; IRIS, 10; CONJUCTIVAE, 20.

PRIMARY IRRITATION SCORE 4.3

RABBIT EYE IRRITATION TRD PROTOCOL NO. 22 BOOK 5 PAGE 152

CONDITIONS 0.1 ml of the product, as received, was introduced into the conjunctival sac.

TIME, HOURS	STRUCTURE	RABBIT NUMBER, VALUE						MEAN VALUE
		1	2	3	4	5	6	
24	CORNEA	0	0	0	0	0	0	0
	IRIS	0	0	0	0	0	0	0
	CONJUNCTIVAE	2	0	0	0	0	0	0.3
48	CORNEA	0	0	0	0	0	0	0
	IRIS	0	0	0	0	0	0	0
	CONJUNCTIVAE	0	0	0	0	0	0	0
72	CORNEA	0	0	0	0	0	0	0
	IRIS	0	0	0	0	0	0	0
	CONJUNCTIVAE	0	0	0	0	0	0	0

AT ANY OF THE READINGS MADE AT 24,48 AND 72 HOURS WAS THERE:

-DISCERNIBLE OPACITY OR ULCERATION OF THE CORNEA OTHER THAN A SLIGHT DULLING OF THE NORMAL LUSTER? YES ☐ NO ☒

-INFLAMMATION OF THE IRIS OTHER THAN SLIGHT DEEPENING OF THE FOLDS, OR SLIGHT CIRCUMCORNEAL INJECTION? YES ☐ NO ☒

-A DIFFUSE, DEEP-CRIMSON RED APPEARANCE OF THE CONJUNCTIVAE, WITH INDIVIDUAL VESSELS NOT EASILY DISCERNIBLE? YES ☐ NO ☒

-AN OBVIOUS SWELLING OF THE CONJUNCTIVAE, EXCLUDING CORNEA AND IRIS, WITH PARTIAL EVERSION OF THE LIDS? YES ☐ NO ☒

WAS THERE DESTRUCTION OR IRREVERSIBLE CHANGE OF ANY TISSUE IN 24 HRS. OR LESS? YES ☐ NO ☒

COMMENTS This product is considered to be slightly toxic by ingestion in single doses and practically non-toxic by single skin applications.

RM 33,423 produces a moderate irritation to the skin of rabbits and a very slight conjunctivitis to the eye of one of 6 rabbits tested. Therefore, precautions should be observed to avoid prolonged or repeated skin contact with this product.

MB Research Laboratories, Inc.

steinsburg and wentz roads
post office box 703
spinnerstown, pennsylvania 18968
215-536-4110

INHALATION TOXICOLOGY REPORT

Project number MB 75-996
For Rohm and Haas

Sample number: RH33423
Description: liquid
Concentration: 2000 ppm

Ten adult Sprague Dawley male rats, obtained from Perfection Breeders, Inc. were used. The animals were housed in closed colony cages and received Purina Laboratory Chow and tap water ad libitum. After equilibration, the animals were weighed and coded.

The group was placed in the Young and Bertke exposure chamber and exposed for one hour. During exposure, food and water were absent but the animals were unrestrained. During the exposure period the animals were observed visually and records were made concerning behavior. Subsequent to exposure the group was observed at 2, 4, 6, and 24 hours and then once daily for fourteen days. Food and water were ad libitum. Any animal that died during the observation period was subjected to necropsy: the lungs, heart, stomach, duodenum, spleen and kidneys were removed and preserved in buffered formalin. At the end of the two weeks the survivors were weighed, sacrificed by cervical dislocation and necropsied.

Air flow through the Young and Bertke chamber was 12.0 cubic feet per minute or 340 liters/minute at a temperature of 72° F. The compound was injected by a constant rate syringe pump into a two liter vaporization chamber. The vapor was then conducted into the main air stream. The syringe drive speed was adjusted for a rate of volume delivery into the vaporizer that was calculated. The Harvard infusion pump could not be adjusted for the exact volume flow rate calculated to result in a final concentration of 2000 ppm in air so the rate which approximated the desired value most closely was chosen.

Specific

The results are presented on the following page.

Respectfully submitted,

Oscar M. Moreno

Oscar M. Moreno, Ph.D.
President

MD

RH 33423

Table 1

Rat No.	Initial Weight (grams)	Terminal Weight (grams)
1	230	318
2	206	294
3	210	177
4	220	294
5	245	336
6	214	293
7	226	311
8	254	349
9	214	290
10	240	326

RH 33423. Behavior during the total period was completely unremarkable. All eyes were open, the rats sniffed the air, engaged in grooming, and constantly explored the chamber. Post exposure behavior, feeding, and drinking were completely unremarkable. All animals survived the fourteen day observation periods. All gained weight except for rat number 3 who lost weight (Table 1). All were unremarkable at necropsy except number 3 whose lungs were virtually solid masses, adherent to the walls of the pleural cavity.

Attachment 2

ROHM AND HAAS COMPANY

INDUSTRIAL HEALTH AND SAFETY
INDEPENDENCE MALL WEST
PHILADELPHIA, PA. 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT
* = CHRONIC HEALTH HAZARD—SEE SEC.

MATERIAL SAFETY DATA SHEET

MATERIAL	CODE	CAT	FREIGHT CLASSIFICATION
3,4- DICHLOROBENZOTRIFLUORIDE	81400	9076-2-8	COMBUSTIBLE LIQUID
	DATE ISSUED 07/28/81		

FORMULA	CHEMICAL NAME & SYNONYMS
C7 H3 Cl2 F3	3,4 dichloro-trifluorotolene

I — INGREDIENTS

	WEIGHT %	TWA/TLV
3,4-dichlorobenzotrifluoride	95-99	See Section IV

II — PHYSICAL DATA

APPEARANCE · ODOR · pH			VISCOSITY
Clear colorless liquid; aromatic odor			No data
MELTING OR FREEZING POINT	**BOILING POINT**	**VAPOR PRESSURE (mm Hg)**	**VAPOR DENSITY (AIR = 1)**
10F	338F (170C)	2 @ 25C	Heavier than air
SOLUBILITY IN WATER	**PERCENT VOLATILE (BY WEIGHT)**	**SPECIFIC GRAVITY (WATER = 1)**	**EVAPORATION RATE (BUTYL ACETATE = 1)**
Negligible	100	1.47	Slower than B.A.

III — FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	AUTOIGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
170F TCC (77C)	No data	No data	No data

EXTINGUISHING MEDIA

[X] FOAM [ ] "ALCOHOL" FOAM [X] CO_2 [X] DRY CHEMICAL [X] WATER FOG [ ] OTHER

SPECIAL FIRE FIGHTING PROCEDURES

Wear MSHA/NIOSH approved self-contained breathing apparatus. Use water spray to cool containers when exposed to excessive heat or fire. Run-off should be contained.

UNUSUAL FIRE AND EXPLOSION HAZARDS Toxic fumes including hydrogen chloride and hydrogen fluoride will be given off when material is exposed to fire. Personnel should remain upwind and avoid exposure to smoke.

IV — HEALTH HAZARD DATA

RECOMMENDED ROHM AND HAAS HEALTH GUIDE TWA (MAXIMUM TIME-WEIGHTED-AVERAGE CONCENTRATION FOR AN 8-HOUR WORK PERIOD)

10 ppm as 3,4-dichlorobenzotrifluoride

EFFECTS OF OVEREXPOSURE

Inhalation: Vapors may cause irritation of nose and throat.
Eye and Skin: Liquid in contact with eyes or skin will be slightly irritating. Prolonged repeated skin contact may cause dermatitis.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move subject to fresh air.

Eye and Skin Contact: Flush eyes with large amounts of water for at least 15 minutes. Consult a physician if irritation persists. Wash affected skin areas with soap and water.

Ingestion: If swallowed dilute by giving 2 glasses of water or milk to drink and call a physician. Never give anything by mouth to an unconscious person.

V – REACTIVITY DATA

STABILITY: [X] STABLE [ ] UNSTABLE

CONDITIONS TO AVOID:

HAZARDOUS DECOMPOSITION PRODUCTS:

HAZARDOUS POLYMERIZATION: [X] MAY OCCUR [ ] WILL NOT OCCUR

CONDITIONS TO AVOID: Strong alkalis

INCOMPATIBILITY MATERIALS TO AVOID: [ ] WATER [X] OTHER Strong alkalies

VI – SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all unprotected and unnecessary personnel from area. Wear MSHA/NIOSH self-contained breathing apparatus and impervious gloves. Eliminate ignition sources. Evacuate the spill area. Dike the spill with inert material (dry sand, fuller's earth, etc.) and if appropriate transfer the liquid and solid to separate containers for recovery or disposal. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Wash clothing before reuse. Keep spill out of sewers and open bodies of water (combustible materials should be kept out of all sewers).

WASTE DISPOSAL METHODS: Incinerate liquid in approved equipment after dilution with a suitable solvent to satisfactory halogen content. Landfill contaminated diking material according to current local, state and federal regulations.

VII – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE

equate to keep vapors below TLV and LEL. (Use non-sparking type motor.)

RESPIRATORY PROTECTION

ne required if good ventilation is maintained. Otherwise wear MSHA/NIOSH approved respirator for vapor concentrations encountered.

PROTECTIVE GLOVES: Impervious

EYE PROTECTION: Chemical splash goggles (ANSI Z87.1, 1979)

OTHER PROTECTIVE EQUIPMENT: Impervious apron; eyewash facility

VIII – STORAGE AND LABELING

STORAGE TEMPERATURE MAX.	MIN.	INDOOR	HEATED	REFRIGERATED	OUTDOOR
		YES	NO	NO	YES

ore in a cool ventilated area away from direct sunlight.

IX – TOXICITY INFORMATION

The toxicity data listed was supplied by Hooker Chemical Company.
Oral LD50 (rat): 1150 mg/kg; Dermal LD50 (rabbit): >5,000 mg/kg
Skin (rabbit): moderate transient irritation
Eye (rabbit): slightly irritating
Inhalation (rat): >17.5 mg/l for one hour; no deaths

X – MISCELLANEOUS INFORMATION

SUPPLIER:
Hooker Chemical Company
Industrial Division
(716) 278-7805

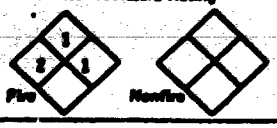
NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	908642-8	07/28/81	06/77

Domestic Supplier's MSDS — Attachment 4

MATERIAL SAFETY DATA SHEET

Hooker

Suggested NFPA Hazard Rating



Product Name	3,4-Dichlorobenzotrifluoride
Chemical Name	3,4-Dichlorobenzotrifluoride, 1,2-Dichloro-4(trifluoromethyl) benzene
Chemical Formula	$C_7H_3Cl_2F_3$
Common Name	3,4-DCBTF
Use	Chemical Intermediate
Chemical Family	Halogenated aromatic
DOT Hazard Classification	
EPA Registration No.	

I HAZARDOUS INGREDIENTS

Ingredients — Hazards are listed in order of decreasing volume or weight	CAS NO.	%	TLV TWA	TLV STEL
3,4-DICHLOROBENZOTRIFLUORIDE	328-84-7	>95		

II TYPICAL PHYSICAL PROPERTIES

Boiling Point, 760mm Hg	173.8°C (344.3°F)	Specific Gravity (H_2O = 1)	1.5
Vapor Pressure mm Hg	1.6 at 20°C (68°F)	Bulk Density	12.3 lbs./gal.
Vapor Density (air = 1)		Percent Volatile By Volume	100
Solubility in Water	Virtually insoluble	Evaporation Rate (Water = 1)	
Appearance and Odor	Clear colorless liquid with faint aromatic odor	Other	Melting Point -12.6°C (9.7°F) Molecular Weight 215.0

III FIRE AND EXPLOSION HAZARD DATA

Flash Point Tag Closed Cup	170°F
Flammable limits in air, % by volume	Upper _____ Lower _____
Auto Ignition Temperature	_____
Capable of Spontaneous Heating	_____
Extinguishing Media	Carbon dioxide, dry chemical, foam, water spray or fog.
Special Fire Fighting Procedures & Personnel Precaution	Cool drums with water, but keep water out of drums to avoid floating and spreading fire. Use self-contained breathing apparatus and full protective equipment.
Unusual Fire and Explosion Hazards	Burning yields toxic hydrogen chloride and hydrogen fluoride gases.

IV EMERGENCY PHONE NUMBER AVAILABLE 24 HRS./DAY

CHEMTREC 1-800-424-9300 · HOOKER 1-716-278-7795

Specialty Chemicals Division, Buffalo Avenue, Niagara Falls, New York, 14302

PRODUCT NAME 3,4-Dichlorobenzotrifluoride

V. REACTIVITY

Incompatibility	Reacts with oxidizing agents /
Hazardous Decomposition Products	Hydrogen Chloride, Hydrogen Fluoride
Conditions to Avoid	Heat, sparks, open flame

VI. HEALTH RELATED DATA

Effects of over exposure (Route) Acute Chronic	Slightly irritating to skin and eyes. Repeated skin exposures may cause dermatitis. Not highly toxic by ingestion. Some irritation of nose and throat may occur. Slightly toxic by inhalation. Acute Oral LD_{50}: 2.9 g/Kg; Acute Dermal LD_{50}: >3.5g/Kg; Acute Inhalation (4 hour LC_{50}): no mortality at 8.6 and 15.9 mg/l. Chronic effects not known.
First Aid Procedures	Remove contaminated clothing. Skin: flush with abundant water; wash with soap and water. Eyes: flush with a directed stream of water for at least 15 minutes, forcibly hold eyelids apart to ensure complete irrigation of all eye and lid tissue. Call a physician. Inhalation: remove to fresh air, administer artificial respiration and/or oxygen. Ingestion: do not induce vomiting; if vomiting occurs, administer water.
Special Medical Procedures Antidotes/ Skin Care	Treatment is symptomatic.
Other	

VII. SPECIAL PROTECTION INFORMATION

Ventilation	General room ventilation plus local exhaust at points of possible fume emission.
Respiratory (type)	Organic vapor mask. Self contained breathing apparatus and full protective equipment for emergencies.
Gloves (type)	Neoprene, vinyl, etc.
Eye Protection (type)	Chemical safety goggles, plus face shield when appropriate, to protect against splashes.
Other	Impervious (rubber, etc.) clothing or apron for splash protection, rubber safety shoes or boots.

VIII. HANDLING AND STORAGE

Handling and Storage Precautions	Store in cool, ventilated, fire-resistant area out of sunlight and away from oxidizing agents. Bike storage tanks separately. Ground equipment, lines, drums etc. to avoid static charges. Provide self-contained breathing apparatus and full protective equipment for emergencies.

IX. SPILL OR LEAK PROCEDURE

Steps taken in event of spill or release	Extinguish flames and sparks away. Contain spill and pump into metal drums. Soak up small spills with sand, earth or commercial absorbents and transfer into suitable containers. Notify authorities if spill enters a stream or sewer.
Waste Disposal Method	Incinerate in equipment designed to handle hydrogen fluoride and hydrogen chloride as products of combustion or submit to contract disposal service for recovery or environmentally acceptable disposal. Dispose of in a manner meeting government regulations.

X. REMARKS AND REFERENCES

Remarks	
References:	Hooker Chemicals and Plastics Corp. Product Data Sheet No. 343A

Code No. SCD-212 Date June, 1980 Rev. Date