



Halocarbon

PRODUCTS CORPORATION

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FYI-94-000953

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OFFICE OF POLLUTION
PREVENTION AND TOXICS
94 APR 12 PM 8:54



FYI-0494-000953

April 7, 1994

Document Processing Center (TS-790)
Attn: Section 8(e) Coordinator
Office of Toxic Substances
U.S. Environmental Protection Agency
401 "M" Street, S.W.
Washington, D.C. 20460



84940000053

SECTION 8(e) NOTICE

Re: 1,1-Dibromo-1-chloro-2,2,2-trifluoroethane (CAS 754-17-6) [Report Name: QC-131]

Dear Sir/Madame:

The following notice is submitted to you in accordance with paragraph V, F in the Agreement between Halocarbon Products Corporation (the Company) and the EPA, "Consent Agreement re Docket No. TSCA-90-H-18", with respect to Section 8(e). Although the report indicates toxicity to animals, this notice is **FOR YOUR INFORMATION ONLY** because the information need not be reported under the provisions of Article V of EPA Statement of Interpretation and Enforcement Policy; Notification of Substantial Risk dated March 16, 1978.

I am the Vice President and Technical Director of the Company. My address is at Company headquarters:

Halocarbon Products Corporation
887 Kinderkamack Road
River Edge, New Jersey 07611
Phone: 201-262-8899

The address of the Company manufacturing site is:

Halocarbon Products Corporation
1100 Dittman Court
North Augusta, South Carolina 29841
Phone: 803-278-3500

8/28/94

The appended report for the chemical substance 1,1-dibromo-1-chloro-2,2,2-trifluoroethane (CAS 754-17-6) was prepared by:

Hazelton Laboratories America, Inc.
1330-B Piccard Drive
Rockville, Maryland 20850

We are not aware of any additional information or supporting technical data.

In summary, the data show:

Of two groups of rats, one exposed to 28.4 mg/L and the other to 70.5 mg/L (huge doses) all succumbed to hypoactivity, apparent anesthetization and slow respiration. Necropsy revealed large areas of discoloration of the lung surfaces.

Very truly yours,



Louis L. Ferstandig, Ph.D
Vice President & Technical Director

LLF:bc

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ACUTE INHALATION EXPOSURE - RATS

QC-131

FINAL REPORT

Submitted to

Halocarbon Products Corporation
Hackensack, New Jersey 07601



HAZLETON LABORATORIES

9200 LEESBURG TURNPIKE • VIENNA, VIRGINIA • 22180

July 24, 1972

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SPONSOR: Halocarbon Products Corporation

DATE: July 24, 1972

MATERIAL: QC-131

SUBJECT: FINAL REPORT
Acute Inhalation Exposure - Rats
Project No. 147-135

OBJECTIVE

The objective of this study was to determine the effects in rats resulting from a six-hour acute inhalation exposure to an atmosphere containing the vapor of QC-131.

EXPERIMENTAL PROCEDURE

Twenty male albino rats weighing between 248 to 299 grams were divided into two groups of 10 rats each and exposed under dynamic conditions in a 100-liter stainless steel and glass inhalation chamber to 5% atmospheres of QC-131 vapor. In each instance, the liquid test material was vaporized by heating the liquid to 60°C. in an oil bath. To attain a 5% atmosphere, 0.5 liters/minute nitrogen was bubbled through the test liquid, and 0.1 liters of oxygen and 9.4 liters of air were added prior to entry into the chamber. In both exposures, the temperature at the point of entry was 25°C. The total airflow through the chamber was maintained at 10 liters/minute.



The concentration was determined nominally. This is a calculated value which is determined from the ratio of the total quantity (mg) of material vaporized into the chamber to the total volume (liters) of airflow through the chamber during the exposure period.

RESULTS

Exposure No. 1 - 5% QC-131

Chamber Concentration:

A.	Time of exposure	= 100 minutes
B.	Quantity of QC-131 vaporized in 100 minutes	= 68.0 g = 68,000 mg
C.	Δ in weight in glass wool plug and affluent tubing	= 39.6 g = 39,600 mg
D.	Quantity of QC-131 vapor entering chamber	= (68,000 mg) - (39,600 mg)
	Quantity of QC-131 vapor entering chamber	= 28,400 mg
E.	Total airflow for 100 minutes	= 10 L/min x 100 min
	Total airflow for 100 minutes	= 1000 liters
F.	Nominal concentration	= 28,400 mg ÷ 1000 L
	Nominal concentration	= 28.4 mg/L

This exposure was terminated at 100 minutes because all of the liquid in the reservoir had vaporized at this point, and there was no additional test material.

Mortality Data

One of 10 rats died as a result of this exposure. This rat was found dead in the cage two days after the exposure.

Clinical Observations

At 15 minutes into the exposure, all rats appeared hypoactive. By 50 minutes into the exposure, respiration was shallow, but the rats appeared normal. At 75 minutes, all rats were extremely hypoactive and abdominal respiration was apparent. Twenty minutes after the termination of the exposure all rats appeared normal. All rats also appeared normal throughout the 14-day postexposure observation period.

Body Weights

All surviving animals recorded average weight increases at the Day 8 and Day 15 intervals.

<u>Test Material</u>	<u>Nominal Conc.</u> (mg/l)	<u>No. of Rats</u>	<u>Mean Weight ± S.E. (No. of Animals)</u>		
			<u>Day 1</u>	<u>Day 8</u>	<u>Day 15</u>
QC-131	28.4	10	262 ± 3.8 (10)	294 ± 5.4 (9)	330 ± 5.3 (9)

Gross Pathology

There were no consistent gross lesions observed in this group.



Exposure No. 2 - 5% QC-131

Chamber Concentration:

A.	Time of exposure	= 190 minutes
B.	Quantity of QC-131 vaporized in 190 minutes	= 230.9 g = 230,900 mg
C.	Δ in weight in glass wool plug and affluent tubing	= 97.0 g = 97,000 mg
D.	Quantity of QC-131 vapor entering chamber	= (230,900 mg) - (97,000 mg)
	Quantity of QC-131 vapor entering chamber	= 133,900 mg
E.	Total airflow for 190 minutes	= 10 liters/min x 190 min
	Total airflow for 190 minutes	= 1900 liters
F.	Nominal concentration	= 133,900 mg ÷ 1900 liters
	Nominal concentration	= 70.5 mg/L

A heating tape maintained at 45°C. was wrapped around the exterior of the glass wool plug to prevent QC-131 vapor from solidifying there.

Mortality Data

All 10 rats died during the exposure to 5% QC-131. The approximate times of death were:

<u>Minutes into Exposure</u>	<u>No. of Deaths</u>
140	2
146	2
162	1
180	2
190	3



Clinical Observations

At 20 minutes into the exposure, all 10 rats were hypoactive and three exhibited abdominal respiration. By 40 minutes into the exposure, all rats appeared to be anesthetized. Subsequently, respiration became quite slow and shallow, and the ensuing deaths were uneventful.

Gross Pathology

The lungs of the animals in this group were dark red in color over large surface areas. In six of the rats, gas was present in the stomach and small intestine.

SUMMARY AND CONCLUSIONS

Two groups of 10 albino male rats were exposed to two different concentrations of QC-131 vapor. The first exposure was at a concentration of 28.4 mg/L for 100 minutes, and the second exposure was at a concentration of 70.5 mg/L for 190 minutes.

The first exposure was terminated at 100 minutes because all of the available QC-131 had vaporized or had solidified in the glass wool traps. None of the rats died during this exposure; however, one rat was found dead in its cage two days after the exposure. Clinical signs exhibited by these animals during the exposure included hypoactivity and shallow respiration followed by abdominal breathing. All surviving rats appeared normal within 20 minutes of the termination of the exposure and throughout the 14-day postexposure observation period. Observations recorded at necropsy were unremarkable.



The second exposure (70.5 mg/L) was terminated at 190 minutes, as all of the rats were dead in the chamber. Clinical signs exhibited by these animals prior to death included hypoactivity, apparent anesthetization, and slow and shallow respiration. Observations recorded at necropsy included large areas of red discoloration on the surface of the lungs, and the presence of gas in the stomach and small intestine.

Submitted by

Joseph W. Hiddeemen

JOSEPH W. HIDDEMEN, Ph.D.
Project Manager
Inhalation Toxicology Section

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NOTE: The research described in this report involved animals maintained in animal care facilities fully accredited by the American Association for Accreditation of Laboratory Animal Care.



CONTAINS NO CBI

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April 7, 1994

Document Processing Center (TS-790)
Attn: Section 8(e) Coordinator
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

REC'D
OFFICE OF POLLUTION
PREVENTION AND TOXICS
APR 12 AM 8:52

Re: Consent Order regarding Halocarbon Products Corporation Docket No. TSCA 90-H-18

Dear Sir/Madame:

This submission is made pursuant to the Consent Order referenced above.

Transmitted herewith are reports on the chemicals listed below:

- * Trifluoroacetyl chloride (CAS 354-32-5)
- ** 2-Chloro-1,1,1,4,4,4-hexafluorobutene-2 (CAS 400-44-2)
- ** Asym dibromodifluoroethylene (CAS 430-85-3)
- ** 1,1,1,2-Tetrabromo-2,2,-difluoroethane (CAS 3470-67-5)
- ** 1,3,4,4-Tetrachloro-1,2,3,4-tetrafluoro-1-butene
- ** C₄F₆Br₄ (CAS 375-24-6)
- ** C₄F₄Br₄Cl₂
- ** CFCl₂(CF₂CFBr)_nCl where n is approximately 2 to 5
- ** CFCIBr(CF₂CFBr)_nBr where n is approximately 5 to 10
- ** CFCIBr(CF₂CFBr)_nBr where n is approximately 4 to 8
- ** CFCIBr(CF₂CFBr)_nBr where n is approximately 2 to 5
- ** CFCl₂(CF₂CFBr)_nCl where n is approximately 3 to 6
- ** CFCl₂(CF₂CFBr)_nCl where n is approximately 4 to 8
- ** 1,1,1,4,4,4-Hexafluoro-2-butanone
- ** 2-Hydroxy-1,1,1,4,4,4-hexafluorobutane
- * 1,1,3,3-Tetrabromo-1,2,2,3-tetrafluoropropane (99%) (CAS 36567-29-0)
- ** Mixture of 2,3-dichloro-1,1,1,4,4,4-hexafluoro-2-butene (99.94%) (CAS 374-07-2) & 2-chloro-1,1,1,4,4,4-hexafluoro-2-butene (0.06%) (CAS 400-44-2)
- ** 1,1-Dibromo-1-chloro-2,2,2-trifluoroethane (CAS 754-17-6)
- ** Cl(CF₂CFCI)₂Cl (CAS 423-38-1)

Reports on chemicals designated by a single asterisk (*) are submitted under paragraph V.F.b of said Consent Order.

Reports on chemicals designated by double asterisks (**) are submitted under paragraph V.F.c on a For Your Information Only basis.

I hereby certify on behalf of Halocarbon Products Corporation that the audit required by said Consent Order has been completed and that to the best of my information and belief the reports listed above are the only reports or studies required or questionably required to be submitted to EPA pursuant to said Consent Order.

Very truly yours,
Halocarbon Products Corporation

By Louis L. Ferstandig
Louis L. Ferstandig, Ph.D
Vice President & Technical Director

LLF:bc
Enclosures