



J. T. Baker Chemical Co.

September 21, 1981

PLAINTIFF'S EXHIBIT

BIR-817

• Mr. Herbert W. Church
Purchasing Analyst
Bird and Son
East Walpole, MA. 02032

Dear Sir:

This will acknowledge your request for Material Safety Data Sheet(s).



We are pleased to enclose copies of our latest available MSDS for the following:

Product

Pyridine	Trichloroethylene
Methylene Chloride	Xylenes



Based on data assembled from reference sources and experience with the product, it has been determined that an MSDS is not required for the indicated chemical(s) due to relatively low hazard rating(s).

Product



At this time an MSDS has not yet been completed for the following. They will be forwarded to you as soon as available.

Product

It is the users responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. We reserve the right to revise or issue new Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the Company to determine if a sheet has been issued.

Cordially,

C. T. Kleppinger

C. T. Kleppinger - Manager
Marketing Information Services

CTK/bls
att.

222 Red School Lane, Phillipsburg, N.J. 08865 / Telephone (201) 859-2151

BIRD 013202



MATERIAL SAFETY DATA SHEET

J. T. Baker Chemical Co., 222 Red School Lane, Phillipsburg, N.J. 08865

SECTION I. IDENTIFICATION OF PRODUCT

CHEMICAL NAME Pyridine	FORMULA C_5H_5N
SYNONYM OR CROSS REFERENCE	CAS NO: 110-86-1

SECTION II. HAZARDOUS INGREDIENTS

MATERIAL	NATURE OF HAZARD
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SECTION III. PHYSICAL DATA

BOILING POINT 115.3°C.	MELTING POINT
VAPOR PRESSURE 10mmHg at 13.2°C.	SPECIFIC GRAVITY 0.98
VAPOR DENSITY (AIR=1) 2.73	PERCENT VOLATILE BY VOLUME (%)
WATER SOLUBILITY Very soluble	EVAPORATION RATE (_____ = 1)

APPEARANCE
Slightly yellow or colorless, liquid; disagreeable odor; sharp taste.

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used) 68°F. (closed cup)	FLAMMABLE LIMITS	Lower 1.8%	Upper 12.4%
FIRE EXTINGUISHING MEDIA			
SPECIAL FIRE-FIGHTING PROCEDURES			

UNUSUAL FIRE AND EXPLOSION HAZARD Flammable liquid. Vapor may travel considerable distance to a source of ignition and flash back. Vapor forms explosive mixtures with air.

SECTION V. HEALTH HAZARD

THRESHOLD LIMIT VALUE scu-rat LD₅₀: 1000 mg/kg orl-rat LD₅₀: 891 mg/kg ..
lethal concentration for rats in air: 4000ppm.

HEALTH HAZARDS
Harmful if inhaled or swallowed. Causes irritation.

FIRST AID PROCEDURES If inhaled, remove to fresh air. Administer artificial respiration or oxygen as needed. Call a physician. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with strong soap solution. If swallowed, if conscious, immediately induce vomiting. Call a physician.

CHEMICAL NAME

SECTION VI. REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID Heat, sparks, flame, steam
	STABLE	X	

INCOMPATIBILITY (materials to avoid)

Oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS

Highly toxic fumes of cyanide.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII. SPILL AND DISPOSAL PROCEDURES

SPILLS

Absorb spill on paper or vermiculite. Carefully sweep up. Allow to evaporate in fume hood. Burn paper or vermiculite. Wash spill site with strong soap solution.

DISPOSAL

Mix with a flammable solvent and spray into fire box of an incinerator with afterburner and scrubber providing environmental regulations permit.

SECTION VIII. PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)

Self-contained breathing apparatus.

VENTILATION	LOCAL Preferable	SPECIAL
	MECHANICAL (general)	OTHER

PROTECTIVE GLOVES

Butyl rubber gloves

EYE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Approved working clothes, safety shower, eyebath, plastic coveralls.

SECTION IX. HANDLING AND STORAGE PRECAUTIONS

STORAGE & HANDLING

Keep in tightly closed container. Wash thoroughly after handling. Use with adequate ventilation.

SECTION X. MISCELLANEOUS INFORMATION

Avoid breathing vapor. Avoid contact with eyes, skin or clothing.

Date Issued: _____ Revision: _____ Approved by: R. M. Mitchell
Manager, Quality Assurance

The information provided in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the users responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. We reserve the right to revise Material Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the company to make sure that the sheet is the latest one issued.



MATERIAL SAFETY DATA SHEET

231

J. T. Baker Chemical Co., 222 Red School Lane, Phillipsburg, N.J. 08865

CHEMICAL NAME

SECTION I . IDENTIFICATION OF PRODUCT

CHEMICAL NAME Methylene Chloride	FORMULA CH_2Cl_2
SYNONYM OR CROSS REFERENCE Dichloromethane Methylene Bichloride	CAS NO: 75-09-2 EPA NO: B137-5254

SECTION II . HAZARDOUS INGREDIENTS

MATERIAL	NATURE OF HAZARD
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SECTION III . PHYSICAL DATA

BOILING POINT 104° F	MELTING POINT Freezing Point -143° F
VAPOR PRESSURE @ 22° C 380 mmHg	SPECIFIC GRAVITY 1.326 at 20°/4° C
VAPOR DENSITY (AIR=1) 2.93 1.92	PERCENT VOLATILE BY VOLUME (%)
WATER SOLUBILITY Soluble in about 50 parts water	EVAPORATION RATE (_____ = 1)
APPEARANCE Colorless liquid; chloroform-like odor.	

SECTION IV . FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used)	FLAMMABLE LIMITS	Lower	Upper
		15.5%	66.4%
FIRE EXTINGUISHING MEDIA			
SPECIAL FIRE-FIGHTING PROCEDURES Contact with hot surfaces or naked flame can cause decomposition, with toxic fumes being produced. Methylene Chloride dissolves many plastics and certain rubber products. For this reason, the protective clothing issued to fire parties must be resistant to this material.			
UNUSUAL FIRE AND EXPLOSION HAZARD Forms flammable vapor-air mixtures at about 100° C or higher.			

SECTION V . HEALTH HAZARD

THRESHOLD LIMIT VALUE 500 ppm A vapor concentration of 2000 ppm may cause anesthesia.
HEALTH HAZARDS Inhalation will cause loss of consciousness. Vapors are highly irritating to eyes. Symptoms: nausea, dizziness, numbness of fingers, feet and mental confusion.
FIRST AID PROCEDURES In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with water. Call a physician. If inhaled, remove to fresh air. Administer oxygen or artificial respiration as necessary.

BIRD 013205

SECTION VI . REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID Heat
	STABLE	X	

INCOMPATIBILITY (materials to avoid)

Nitrogen Tetroxide; Oxygen (liquid)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII . SPILL AND DISPOSAL PROCEDURES**SPILLS**

Eliminate all sources of ignition. Absorb on sand, earth, or vermiculite. Carefully sweep up and remove. Flush spill area with water. Alternatively use a J. T. Baker Flammable Solvent Spill Cleanup Kit.

DISPOSAL

Dispose at an approved landfill site providing environmental regulations permit.

SECTION VIII . PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)

Air line respirator

VENTILATION	LOCAL Preferable	SPECIAL
	MECHANICAL (general)	OTHER

PROTECTIVE GLOVES

Rubber gloves

EYE PROTECTION

Safety glasses; safety goggles.

OTHER PROTECTIVE EQUIPMENT

Approved working clothes; rubber protective clothing; safety shower; eyebath.

SECTION IX . HANDLING AND STORAGE PRECAUTIONS**STORAGE & HANDLING**

Store in a cool, dry, well-ventilated location.

Wash thoroughly after handling

SECTION X . MISCELLANEOUS INFORMATION

Avoid contact with eyes, skin, and clothing.

Avoid prolonged or repeated breathing of vapor.

Use only with adequate ventilation.

Date issued: 5/21/74

Approved by

B. J. Gilbert
Manager, Quality Assurance

Revision No. & Date Issued: _____

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MATERIAL SAFETY DATA SHEET

J. T. Baker Chemical Co., 222 Red School Lane, Phillipsburg, N.J. 08865

CHEMICAL NAME

SECTION I . IDENTIFICATION OF PRODUCT

CHEMICAL NAME Trichloroethylene	FORMULA <chem>CHClCCl2</chem>
SYNONYM OR CROSS REFERENCE Trichloroethene Ethylene Trichloride Ethinyl Trichloride Triclene	CAS NO: 79-01-6 EPA NO:

SECTION II . HAZARDOUS INGREDIENTS

MATERIAL	NATURE OF HAZARD
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SECTION III . PHYSICAL DATA

BOILING POINT 87.0°C (188°F)	MELTING POINT -73°C
VAPOR PRESSURE 19.9mm Hg @ 0°C	SPECIFIC GRAVITY 20°/4°C (water=1) 1.464
VAPOR DENSITY (AIR=1) 4.53	PERCENT VOLATILE BY VOLUME (%)
WATER SOLUBILITY 0.1 grams per 100 ml.	EVAPORATION RATE (_____ = 1)
APPEARANCE colorless, heavy liquid with chloroform-like odor	

SECTION IV . FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used) Practically nonflammable	FLAMMABLE LIMITS	Lower 12.5%	Upper 90%
FIRE EXTINGUISHING MEDIA			
SPECIAL FIRE-FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARD vapor may decompose into toxic or corrosive substances at high temperatures			

SECTION V . HEALTH HAZARD

THRESHOLD LIMIT VALUE 100ppm
HEALTH HAZARDS Harmful if inhaled or swallowed. Causes irritation.
FIRST AID PROCEDURES If inhaled, remove to fresh air. Administer oxygen or artificial respiration as needed. Call a physician. If swallowed, if conscious, immediately induce vomiting. Call a physician. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician.

SECTION VI . REACTIVITY DATA

STABILITY

UNSTABLE

STABLE

X

CONDITIONS TO AVOID

INCOMPATABILITY (materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

Corrosive acid fumes

HAZARDOUS
POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

CONDITIONS TO AVOID

SECTION VII . SPILL AND DISPOSAL PROCEDURES

SPILLS

Absorb on paper or vermiculite. Evaporate in a hood. Burn paper or vermiculite.
Flush spill area with water. Alternatively use J.T.Baker Flammable Solvent Spill Cleanup Kit
(Product No. 4437)

DISPOSAL

Purify contaminated liquids by distillation and reuse pure distillate

SECTION VIII . PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)

self-contained breathing apparatus

VENTILATION

LOCAL

SPECIAL

Preferable

MECHANICAL (general)

OTHER

PROTECTIVE GLOVES

Rubber gloves

EYE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Approved working clothes, safety shower, eye wash

SECTION IX . HANDLING AND STORAGE PRECAUTIONS

STORAGE & HANDLING

Keep in tightly closed container.
Wash thoroughly after handling.

SECTION X . MISCELLANEOUS INFORMATION

Avoid breathing vapor.
Avoid contact with eyes, skin or clothing.
Use with adequate ventilation.

Date Issued: 3/21/80

Approved by

B.J. Aubrey
Manager, Quality Assurance

Revision No. & Date Issued:

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MATERIAL SAFETY DATA SHEET

391

J. T. Baker Chemical Co., 222 Red School Lane, Phillipsburg, N.J. 08865

CHEMICAL NAME

SECTION I . IDENTIFICATION OF PRODUCT

CHEMICAL NAME	FORMULA
Xylenes	$C_6H_4(CH_3)_2$
SYNONYM OR CROSS REFERENCE	CAS NO: EPA NO: 1330207

SECTION II . HAZARDOUS INGREDIENTS

MATERIAL	NATURE OF HAZARD
Contains some ethylbenzene	

SECTION III . PHYSICAL DATA

BOILING POINT	MELTING POINT
VAPOR PRESSURE	SPECIFIC GRAVITY 0.86
VAPOR DENSITY (AIR=1)	PERCENT VOLATILE BY VOLUME (%)
WATER SOLUBILITY Insoluble	EVAPORATION RATE (_____ = 1)
APPEARANCE Liquid	

SECTION IV . FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used)	FLAMMABLE LIMITS	Lower	Upper
75°F. (cc)			
FIRE EXTINGUISHING MEDIA			
Water spray, alcohol foam, dry chemical or carbon dioxide.			
SPECIAL FIRE-FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARD			

SECTION V . HEALTH HAZARD

THRESHOLD LIMIT VALUE
100 ppm; 435 mg/M ³ orl-rat LD ₅₀ : 4300 mg/kg
HEALTH HAZARDS
Harmful if inhaled. Causes irritation
FIRST AID PROCEDURES
If swallowed, do not induce vomiting. Call a physician. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician.

BIRD 013209

SECTION VI . REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID Heat, sparks, flame.
	STABLE	X	

INCOMPATIBILITY (materials to avoid)

Oxidizing material

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII . SPILL AND DISPOSAL PROCEDURES**SPILLS**

Eliminate all sources of ignition. Absorb spill on sand, earth or vermiculite. Carefully sweep up and remove. Flush spill area with water. Alternatively use J.T.Baker's Flammable Solvent Clean-Up Kit (Product No. 4437)

DISPOSAL

Burn above mixture in a furnace if local environmental regulations permit.

SECTION VIII . PROTECTION INFORMATION**RESPIRATORY PROTECTION (specify type)**

Have all-purpose cannister mask available

VENTILATION	LOCAL X	SPECIAL
	MECHANICAL (general) X	OTHER

PROTECTIVE GLOVES Rubber gloves	EYE PROTECTION Face shield
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OTHER PROTECTIVE EQUIPMENT

Approved working clothes

SECTION IX . HANDLING AND STORAGE PRECAUTIONS**STORAGE & HANDLING**

Keep away from heat, sparks and flame. Keep in tightly closed container.

SECTION X . MISCELLANEOUS INFORMATION

Avoid breathing vapor. Avoid contact with eyes, skin, clothing. Wash thoroughly after handling.

Date issued: 4/17/78
Revision No. & Date Issued: _____

Approved by: *[Signature]*
Manager, Quality Assurance

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