

JUN 11 1990

J.T.BAKER INC. 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865  
M A T E R I A L S A F E T Y D A T A S H E E T  
24-HOUR EMERGENCY TELEPHONE -- (201) 859-2151  
CHEMTREC # (800) 424-9300 -- NATIONAL RESPONSE CENTER # (800) 424-8802

M4420 M06  
EFFECTIVE: 09/14/89

METHYLENE CHLORIDE

PAGE: 1  
ISSUED: 09/21/89

J.T.BAKER INC., 222 RED SCHOOL LANE, PHILLIPSBURG, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: METHYLENE CHLORIDE  
COMMON SYNONYMS: DICHLOROMETHANE; METHYLENE DICHLORIDE; METHANE DICHLORIDE  
CHEMICAL FAMILY: CHLORINATED HYDROCARBONS  
FORMULA: CH2CL2  
FORMULA WT.: 84.93  
CAS NO.: 75-09-2  
NIOSH/RTECS NO.: PA8050000  
PRODUCT USE: LABORATORY REAGENT  
PRODUCT CODES: 9313,5378,9264,9330,9341,Q480,9315,5531,9324,9329,9128

PRECAUTIONARY LABELING

BAKER SAF-T-DATA\* SYSTEM

HEALTH	-	3	SEVERE (CANCER CAUSING)
FLAMMABILITY	-	1	SLIGHT
REACTIVITY	-	1	SLIGHT
CONTACT	-	2	MODERATE

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

WARNING

MAY BE FATAL IF SWALLOWED OR INHALED. CAUSES IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. NOTE: REPORTED AS CAUSING CANCER IN LABORATORY ANIMALS. EXERCISE DUE CARE. EXCEPTIONAL CONTACT HAZARD: READ MATERIAL SAFETY DATA SHEET.  
KEEP AWAY FROM HEAT, MOISTURE, AND DIRECT SUNLIGHT. AVOID CONTACT WITH EYES, SKIN, CLOTHING. DO NOT BREATHE VAPOR. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. IN CASE OF SPILL, SOAK UP WITH SAND OR EARTH.

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PRECAUTIONARY LABELING (CONTINUED)

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INTERNATIONAL LABELING

HARMFUL BY INHALATION. POSSIBLE RISKS OF IRREVERSIBLE EFFECTS.  
AVOID CONTACT WITH SKIN.

SAF-T-DATA\* STORAGE COLOR CODE: BLUE (HEALTH)

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SECTION II - COMPONENTS

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COMPONENT	CAS NO.	WEIGHT %	OSHA/PEL	ACGIH/TLV
METHYLENE CHLORIDE	75-09-2	98-100	500 PPM	50 PPM

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SECTION III - PHYSICAL DATA

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BOILING POINT: 40 C (104 F) VAPOR PRESSURE (MMHG): 350  
(AT 760 MM HG) (20 C)

MELTING POINT: -95 C (-139 F) VAPOR DENSITY (AIR=1): 2.9  
(AT 760 MM HG)

SPECIFIC GRAVITY: 1.32 EVAPORATION RATE: 27.5  
(H2O=1) (BUTYL ACETATE = 1)

SOLUBILITY(H2O): MODERATE (1-10%) % VOLATILES BY VOLUME: 100  
(21 C)

PH: N/A

ODOR THRESHOLD (P.P.M.): N/A PHYSICAL STATE: LIQUID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: CLEAR, COLORLESS LIQUID. ETHER-LIKE ODOR.

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MATERIAL SAFETY DATA SHEET  
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SECTION IV - FIRE AND EXPLOSION HAZARD DATA  
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FLASH POINT (CLOSED CUP): N/A NFPA 704M RATING: 2-1-0

AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: UPPER - 19 % LOWER - 12 %

FIRE EXTINGUISHING MEDIA

USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE-FIGHTING PROCEDURES

FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS

CONCENTRATED VAPOR CAN BE IGNITED BY A HIGH INTENSITY IGNITION SOURCE. VAPOR MAY FORM FLAMMABLE MIXTURE IN ATMOSPHERE THAT CONTAINS A HIGH PERCENTAGE OF OXYGEN. CLOSED CONTAINERS EXPOSED TO HEAT MAY EXPLODE.

TOXIC GASES PRODUCED

HYDROGEN CHLORIDE, PHOSGENE, CHLORINE, CARBON MONOXIDE, CARBON DIOXIDE

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT

NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE

NONE IDENTIFIED.

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SECTION V - HEALTH HAZARD DATA  
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THRESHOLD LIMIT VALUE (TLV/TWA): 174 MG/M3 (50 PPM)

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): (500 PPM)

PEL (CEILING) = 1000 PPM.

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SECTION V - HEALTH HAZARD DATA (CONTINUED)  
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TOXICITY OF COMPONENTS

ORAL RAT LD50 FOR METHYLENE CHLORIDE	2136 MG/KG
INTRAPERITONEAL MOUSE LD50 FOR METHYLENE CHLORIDE	437 MG/KG
SUBCUTANEOUS MOUSE LD50 FOR METHYLENE CHLORIDE	6460 MG/KG
INHALATION-30MIN RAT LC50 FOR METHYLENE CHLORIDE	88 G/M3
CARCINOGENICITY: NTP: NO IARC: YES Z LIST: NO OSHA REG: NO	

CARCINOGENICITY

THIS SUBSTANCE IS LISTED AS AN IARC PROBABLE HUMAN CARCINOGEN (GROUPS 2A AND 2B).

REPRODUCTIVE EFFECTS

TESTS ON LABORATORY ANIMALS INDICATE MATERIAL MAY BE MUTAGENIC.

EFFECTS OF OVEREXPOSURE

INHALATION: HEADACHE, NAUSEA, VOMITING, DIZZINESS, NARCOSIS, WEAKNESS, FATIGUE, IRRITATION OF UPPER RESPIRATORY TRACT, CENTRAL NERVOUS SYSTEM DEPRESSION, CAUSES METHEMOGLOBULIN FORMATION IN THE BLOOD, PULMONARY EDEMA, UNCONSCIOUSNESS, AND MAY BE FATAL

SKIN CONTACT: IRRITATION, MAY BE HARMFUL, PROLONGED CONTACT MAY CAUSE DERMATITIS

EYE CONTACT: IRRITATION, MAY CAUSE TEMPORARY CORNEAL DAMAGE

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION: HEADACHE, NAUSEA, VOMITING, DIZZINESS, NARCOSIS, WEAKNESS, FATIGUE, GASTROINTESTINAL IRRITATION, CENTRAL NERVOUS SYSTEM DEPRESSION, CAUSES METHEMOGLOBULIN FORMATION IN THE BLOOD, UNCONSCIOUSNESS, AND MAY BE FATAL

CHRONIC EFFECTS: DAMAGE TO LIVER, KIDNEYS, LUNGS, BLOOD, CENTRAL NERVOUS SYSTEM

TARGET ORGANS

RESPIRATORY SYSTEM, LUNGS, CARDIOVASCULAR SYSTEM, CENTRAL NERVOUS SYSTEM, LIVER, KIDNEYS, EYES, SKIN

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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE  
CARDIOVASCULAR DISORDERS, HEART DISORDERS, LIVER OR KIDNEY DISORDERS,  
CENTRAL NERVOUS SYSTEM DISORDERS, HEAVY DRINKERS, HEAVY SMOKERS

PRIMARY ROUTES OF ENTRY  
INHALATION, INGESTION, SKIN CONTACT, EYE CONTACT, ABSORPTION

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CALL A PHYSICIAN. IF SWALLOWED, DO NOT INDUCE VOMITING.

INHALATION: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE  
ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE  
OXYGEN.

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF  
WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED  
CLOTHING AND SHOES. WASH CLOTHING BEFORE RE-USE.

EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF  
WATER FOR AT LEAST 15 MINUTES.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

ACUTE: YES CHRONIC: YES FLAMMABILITY: NO PRESSURE: NO REACTIVITY: NO

EXTREMELY HAZARDOUS SUBSTANCE: NO

CERCLA HAZARDOUS SUBSTANCE: YES CONTAINS 2-BUTANONE (RQ = 5000 LBS)

TOXIC CHEMICALS: YES CONTAINS DICHLOROMETHANE (METHYLENE  
CHLORIDE)

GENERIC CLASS: CO2

TSCA INVENTORY: YES

STATE LISTS: FOR PRODUCTS SOLD IN THE STATE OF CALIFORNIA, THE STATE REQUIRES  
THAT WE PROVIDE TO USERS AND THEIR EMPLOYEES THE FOLLOWING MESSAGE: WARNING:  
THIS PRODUCT IS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

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SECTION VI - REACTIVITY DATA  
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STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: HEAT, FLAME, OTHER SOURCES OF IGNITION, MOISTURE,  
LIGHT

INCOMPATIBLES: ALKALI METALS, STRONG OXIDIZING AGENTS, STRONG BASES,  
OXIDES OF NITROGEN, ZINC, ALUMINUM, WATER, MAGNESIUM,  
AMINES, PLASTICS, RUBBER, SODIUM, POTASSIUM

DECOMPOSITION PRODUCTS: HYDROGEN CHLORIDE, PHOSGENE, CHLORINE, CARBON  
MONOXIDE, CARBON DIOXIDE

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SECTION VII - SPILL & DISPOSAL PROCEDURES  
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STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE  
WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. STOP  
LEAK IF YOU CAN DO SO WITHOUT RISK. USE WATER SPRAY TO REDUCE VAPORS.  
TAKE UP WITH SAND OR OTHER NON-COMBUSTIBLE ABSORBENT MATERIAL AND PLACE  
INTO CONTAINER FOR LATER DISPOSAL. FLUSH SPILL AREA WITH WATER.

DISPOSAL PROCEDURE  
DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL  
ENVIRONMENTAL REGULATIONS.

EPA HAZARDOUS WASTE NUMBER: U080 (TOXIC WASTE)

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT  
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VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV  
REQUIREMENTS.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION REQUIRED IF AIRBORNE  
CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS ABOVE  
100 PPM, A SELF-CONTAINED BREATHING APPARATUS IS  
ADVISED.

EYE/SKIN PROTECTION: SAFETY GOGGLES AND FACE SHIELD, UNIFORM, PROTECTIVE  
SUIT, POLYVINYL ALCOHOL GLOVES ARE RECOMMENDED.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS  
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SAF-T-DATA\* STORAGE COLOR CODE: BLUE (HEALTH)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. STORE IN SECURE POISON AREA. KEEP  
CONTAINERS OUT OF SUN AND AWAY FROM HEAT.

SPECIAL PRECAUTIONS

MATERIAL IS HYGROSCOPIC.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION  
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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: DICHLOROMETHANE (AIR ONLY)  
HAZARD CLASS: ORM-A  
(NA: UN1593 REPORTABLE QUANTITY: 1000 LBS.  
LABELS: NONE  
REGULATORY REFERENCES: 49CFR 172.101; 173.500; 173.510

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: DICHLOROMETHANE  
HAZARD CLASS: 6.1  
UN: UN1593 MARINE POLLUTANTS: NO  
LABELS: HARMFUL - STOW AWAY FROM FOOD STUFFS  
REGULATORY REFERENCES: 49CFR 172.102; PART 176; IMO  
I.M.O. PAGE: 6118  
PACKAGING GROUP: III

AIR (I.C.A.O.)

PROPER SHIPPING NAME: DICHLOROMETHANE  
HAZARD CLASS: 6.1  
UN: UN1593  
LABELS: HARMFUL - STOW AWAY FROM FOOD STUFFS  
REGULATORY REFERENCES: 49CFR 172.101; 173.6; PART 175; ICAO/IATA  
PACKAGING GROUP: III

U.S. CUSTOMS HARMONIZATION NUMBER: 29031200000

EPA/TSCA EXPORT NOTIFICATION  
YES

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N/A = NOT APPLICABLE OR NOT AVAILABLE  
N/E = NOT ESTABLISHED  
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THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET MEETS THE REQUIREMENTS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT AND REGULATIONS PROMULGATED THEREUNDER (29 CFR 1910.1200 ET. SEQ.) AND THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PERSON TRAINED IN, OR SUPERVISED BY A PERSON TRAINED IN, CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS AND DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION. DEPENDING ON USAGE, PROTECTIVE CLOTHING INCLUDING EYE AND FACE GUARDS AND RESPIRATORS MUST BE USED TO AVOID CONTACT WITH MATERIAL OR BREATHING CHEMICAL VAPORS/FUMES.

EXPOSURE TO THIS PRODUCT MAY HAVE SERIOUS ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, BAKER CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH OTHER CHEMICALS OR MATERIALS. BAKER WARRANTS THAT THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE LABEL. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

THE USER SHOULD RECOGNIZE THAT THIS PRODUCT CAN CAUSE SEVERE INJURY AND EVEN DEATH, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDED. READ ALL PRECAUTIONARY INFORMATION. AS NEW DOCUMENTED GENERAL SAFETY INFORMATION BECOMES AVAILABLE, BAKER WILL PERIODICALLY REVISE THIS MATERIAL SAFETY DATA SHEET. IF YOU HAVE ANY QUESTIONS, PLEASE CALL CUSTOMER SERVICE (1-800-JTBAKER) FOR ASSISTANCE.

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APPROVED BY QUALITY ASSURANCE DEPARTMENT.

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