

EM SCIENCE
A DIVISION OF EM INDUSTRIES
P.O. BOX 70
480 DEMOCRAT RD.
GIBBSTOWN, N.J. 08027

M A T E R I A L S A F E T Y D A T A S H E E T
PREPARATION DATE: OCT 6, '89
DATE SENT TO CUSTOMER.....: DEC 20, '89
INFORMATION PHONE NUMBER :
(609) 354-9200
CHEMTREC EMERGENCY NUMBER:
1-800-424-9300

NFPA HAZARD RATINGS
- HEALTH: 2 FLAMMABILITY: 0
- REACTIVITY : 0 SPECIAL HAZARDS..:

SECTION I - GENERAL INFORMATION
CATALOG NUMBER(S): CX1051 CX1053 CX1054 CX1055 CX1055P
 CX1057 CX1059 CX1060 CX1050
CHEMICAL NAME.....: ~~CHLOROFORM~~ Chloroform
TRADE NAME.....: TRICHLOROMETHANE
C.A.S. NUMBER.....: 67-66-3
CHEMICAL FAMILY...: CHLORINATED HYDROCARBON
FORMULA.....: CHCL.3.
MOLECULAR WEIGHT.: 119.38
DOT SHIPPING NAME: CHLOROFORM
DOT NUMBER.....: UN1888

SECTION II - HAZARDOUS INGREDIENTS
NONE OTHER THAN SPECIFIED PRODUCT

SECTION III - PHYSICAL DATA
BOILING POINT (C 760 MM HG): 61.2C
MELTING POINT (C).....: -63.5C
SPECIFIC GRAVITY(H.2.O = 1).....: 1.49
VAPOR PRESSURE..(MM HG).....: 167 20C
PERCENT VOLATILE BY VOL (%): 100
VAPOR DENSITY (AIR=1).....: 4.12
EVAPORATION RATE (BUAC=1).....: 0.56
SOLUBILITY IN WATER (x).....: SLIGHT
APPEARANCE AND OODR.....: CLEAR, COLORLESS LIQUID, SWEET,
ETHEREAL ODOR

SECTION IV - FIRE & EXPLOSION HAZARD DATA
MSDS-CX1050 PAGE # : 01

THE STATEMENTS CONTAINED HEREIN ARE OFFERED FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED UPON TECHNICAL DATA THAT EM SCIENCE BELIEVES TO BE ACCURATE. IT IS INTENDED FOR USE ONLY BY PERSONS HAVING THE NECESSARY TECHNICAL SKILL AND AT THEIR OWN DISCRETION AND RISK. SINCE CONDITIONS AND MANNER OF USE ARE OUTSIDE OUR CONTROL, WE MAKE NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE.

FLASH POINT (F).....: NONE (TCC)
FLAMMABLE LIMITS LEL %.: N/A
FLAMMABLE LIMITS UEL %.: N/A
EXTINGUISHING MEDIA.....: USE ANY SUITABLE FOR ADJACENT MATERIALS
FIRE FIGHTING PROC.....: WEAR SELF-CONTAINED BREATHING APPARATUS
FIRE & EXPL. HAZARDS....: PRODUCES HIGHLY TOXIC FUMES ON THERMAL
DECOMPOSITION

SECTION V - HEALTH HAZARD DATA (ACUTE AND CHRONIC)

ACGIH TLV/OSHA PEL (TWA).....: (TLV) 10 PPM
(OSHA) 2 PPM

TOXICITY DATA.....:

ORL-HMN LDLO: 140 MG/KG
ORL-RAT LD50: 908 MG/KG
IHL-RAT LC50: 47702 UG/CU.M./4H

SYMPTOMS OF EXPOSURE

-HARMFUL IF INHALED OR SWALLOWED.

REPEATED EXPOSURE TO LOW CONCENTRATIONS MAY DAMAGE LIVER, KIDNEYS AND
HEART.

ALSO CAUSES HEADACHE, DROWSINESS, MENTAL CONFUSION, NAUSEA AND
UNCONSCIOUSNESS.

HIGHLY SUSPECTED CARCINOGEN PER NTP AND IARC.

MEDICAL COND. AGGRAVATED BY EXP: PREGNANCY, ALCOHOLISM, LIVER, HEART AND
KIDNEY CONDITIONS

ROUTES OF ENTRY.....: INHALATION, INGESTION OR SKIN CONTACT.

CARCINOGENICITY.....:

PROVEN ANIMAL CARCINOGENIC SUBSTANCE. POSSIBLE CANCER HAZARD.

EMERGENCY FIRST AID.....:

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

SKIN: IMMEDIATELY FLUSH THOROUGHLY WITH LARGE AMOUNTS OF WATER.

EYES: IMMEDIATELY FLUSH THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES

INHALATION: REMOVE TO FRESH AIR; GIVE ARTIFICIAL RESPIRATION IF
BREATHING HAS STOPPED.

INGESTION: IF CONSCIOUS, INDUCE VOMITING.

GET IMMEDIATE MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

STABILITY.....: YES

CONDITIONS TO AVOID

CONTACT WITH OPEN FLAME, ELECTRIC ARCS, OTHER HOT SURFACES

MATERIALS TO AVOID.....: () WATER () ACIDS

(X) BASES () CORROSIVES (X) OXIDIZERS

(X) OTHER: ALKALI METALS, ACETONE, DINITROGEN TETRAOXIDE, FLUORINE,
TRIIISOPROPYLPHOSPHINE, DISILANE, MAGNESIUM

HAZARDOUS POLYMERIZATION.: DOES NOT OCCUR
HAZARDOUS DECOMPOSITION.: CO.X., PHOSGENE, OTHER CHLORINE COMPOUNDS

SECTION VII - ENVIRONMENTAL PROTECTION PROCEDURES

SPILL RESPONSE:

-VENTILATE AREA; DIKE SPILL
TAKE UP WITH ABSORBENT AND CONTAINERIZE FOR PROPER DISPOSAL
WASTE DISPOSAL: TO BE PERFORMED IN COMPLIANCE WITH ALL CURRENT LOCAL,
STATE AND FEDERAL REGULATIONS.

SECTION VIII - SPECIAL PROTECTION INFORMATION

VENTILATION, RESPIRATORY PROTECTION, PROTECTIVE CLOTHING, EYE PROTECTION:
-MATERIAL MUST BE HANDLED OR TRANSFERRED IN AN APPROVED FUME HOOD
OR WITH EQUIVALENT VENTILATION
PROTECTIVE GLOVES (VITON, PVA OR EQUIVALENT) SHOULD BE WORN
TO PREVENT SKIN CONTACT
SAFETY GLASSES WITH SIDE SHIELDS SHOULD BE WORN AT ALL TIMES
NIOSH/MSHA-APPROVED RESPIRATOR SHOULD BE WORN IN THE ABSENCE OF
ADEQUATE VENTILATION.

SECTION IX - SPECIAL PRECAUTIONS

HANDLING & STORAGE

-KEEP CONTAINER TIGHTLY CLOSED
DO NOT BREATHE VAPOR
DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING
STORE IN A COOL, WELL-VENTILATED AREA, OUT OF DIRECT SUNLIGHT
WORK/HYGIENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING. DO NOT TAKE
INTERNALLY. EYE WASH AND SAFETY EQUIPMENT SHOULD BE READILY AVAILABLE.

SECTION X - OTHER INFORMATION

COMMENTS.....

TESTS ON LABORATORY ANIMALS INDICATE MATERIAL MAY CAUSE TUMORS
AND MAY PRODUCE ADVERSE MUTAGENIC AND REPRODUCTIVE EFFECTS
REVISION HISTORY.....: 08/01/81, 9/83, 12/85, 6/4/86, 9/20/86,
2/23/87, 10/27/87

N/A = NOT AVAILABLE: