MATERIAL SAFETY DATA SHEET
PREPARATION DATE: OCT 01, '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

SECTION I - GENERAL INFORMATION
CATALOG NUMBER(S): CX1051, CX1053, CX1054, CX1055, CX1055P
CHEMICAL NAME: CHLOROFORM
TRADE NAME: TRICHLOROMETHANE
C.A.S. NUMBER: 67-66-3
CHEMICAL FAMILY: CHLORINATED HYDROCARBON
FORMULA: CHCl₃
MOLECULAR WEIGHT: 119.38
DOT SHIPPING NAME: CHLOROFORM
DOT NUMBER: UN1888

NONE OTHER THAN SPECIFIED PRODUCT

SECTION II - HAZARDOUS INGREDIENTS

SECTION III - PHYSICAL DATA
BOILING POINT (°C, 760 MM HG): 61.2°C
MELTING POINT (°C): -63.5°C
SPECIFIC GRAVITY (H₂O = 1): 1.49
VAPOR PRESSURE (MM HG): 167 20°C
PERCENT VOLATILE BY VOL (%): 100
VAPOR DENSITY (AIR = 1): 4.12
EVAPORATION RATE (8HAC = 1): 0.56
SOLUBILITY IN WATER (%): SLIGHT
APPEARANCE AND ODOR: CLEAR, COLORLESS LIQUID, SWEET, ETHEREAL ODOR

SECTION IV - FIRE & EXPLOSION HAZARD DATA
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
- BASES
- CORROSIVES
- OXIDIZERS
- ALKALI METALS, ACETONE, DINITROGEN TETRAOXIDE, FLUORINE,
- TRIISOPROPYLPHOSPHINE, DISILANE, MAGNESIUM

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HAZARDOUS POLYMERIZATION: DOES NOT OCCUR
HAZARDOUS DECOMPOSITION: CO₂, 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: