
Material Safety Data Sheet for Perchloroethylene (Perc)

1 - PRODUCT IDENTIFICATION

PRODUCT NAME: TETRACHLOROETHYLENE

FORMULA: CL₂C:CCL₂

FORMULA WT: 165.83

CAS NO.: 00127-18-4

NIOSH/RTECS NO.: KX3850000

COMMON SYNONYMS: PERCHLOROETHYLENE; ETHYLENE
TETRACHLORIDE; CARBON BICHLORIDE; CARBON DICHLORIDE

PRODUCT CODES: 9218, 9453, 5380, 9465

EFFECTIVE: 02/12/87

REVISION #03

PRECAUTIONARY LABELING

BAKER SAF-T-DATA(TM) SYSTEM

HAZARD RATINGS ARE 0 TO 4 (0=NO HAZARD; 4=EXTREME HAZARD).

HEALTH - 3 SEVERE (CANCER CAUSING)

FLAMMABILITY - 0 NONE

REACTIVITY - 0 NONE

CONTACT - 3 SEVERE (LIFE)

LABORATORY PROTECTIVE EQUIPMENT

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

PRECAUTIONARY LABEL STATEMENTS

DANGER: HARMFUL IF SWALLOWED OR INHALED

EXCEPTIONAL HEALTH AND CONTACT HAZARDS - READ MATERIAL SAFETY DATA SHEET

NOTE: REPORTED AS CAUSING CANCER IN LABORATORY ANIMALS. EXERCISE DUE CARE.

NOTE: THIS MATERIAL OR ITS VAPORS IN CONTACT WITH FLAMES OR HOT GLOWING SURFACES MAY FORM CORROSIVE ACID FUMES.

KEEP AWAY FROM HEAT, SPARKS, FLAME. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. AVOID BREATHING VAPOR. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE

VENTILATION. WASH THOROUGHLY AFTER HANDLING.

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

2 - HAZARDOUS COMPONENTS

COMPONENT	%	CAS NO.
TETRACHLOROETHYLENE	90-100	127-18-4

3 - PHYSICAL DATA

BOILING POINT: 121 C (250 F) VAPOR PRESSURE(MM HG): 13
MELTING POINT: -22 C (-8 F) VAPOR DENSITY(AIR=1): 5.8
SPECIFIC GRAVITY: 1.62 EVAPORATION RATE: 2.80

(H2O=1) (BUTYL ACETATE=1)

SOLUBILITY(H2O): NEGLIGIBLE (LESS THAN 0.1 %) % VOLATILES BY VOLUME: 100

APPEARANCE & ODOR: COLORLESS LIQUID WITH ETHER OR CHLOROFORM ODOR.

4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: CLOSED CUP N/A NFPA 704M RATING: 2-0-0

FLAMMABLE LIMITS: UPPER - N/A % LOWER - N/A %

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: CLOSED CONTAINERS EXPOSED TO HEAT MAY EXPLODE.

TOXIC GASES PRODUCED: HYDROGEN CHLORIDE, PHOSGENE, CARBON MONOXIDE, CARBON DIOXIDE

5 - HEALTH HAZARD DATA

ACCEPTABLE MAXIMUM PEAK ABOVE THE ACCEPTANCE CEILING CONCENTRATION FOR AN EIGHT-HOUR SHIFT=300 PPM FOR 5 MINUTES IN ANY 3 HOURS. (PEL) CEILING=200 PPM
THRESHOLD LIMIT VALUE (TLV/TWA): 335 MG/M3 (50 PPM) SHORT-TERM EXPOSURE LIMIT (STEL): 1340 MG/M3 (200 PPM)
PERMISSIBLE EXPOSURE LIMIT (PEL): MG/M3 (100 PPM)
TOXICITY:

LD50 (ORAL-RAT)(MG/KG) - 8850

LD50 (IPR-MOUSE)(MG/KG) - 4700

CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

EFFECTS OF OVEREXPOSURE: INHALATION OF VAPORS MAY CAUSE HEADACHE, NAUSEA, VOMITING, DIZZINESS, DROWSINESS, IRRITATION OF RESPIRATORY TRACT, AND LOSS OF CONSCIOUSNESS. LIQUID MAY BE IRRITATING TO SKIN AND EYES. PROLONGED SKIN CONTACT MAY RESULT IN DERMATITIS. EYE CONTACT MAY RESULT IN TEMPORARY CORNEAL DAMAGE. INGESTION MAY CAUSE NAUSEA, VOMITING, HEADACHES, DIZZINESS, GASTROINTESTINAL IRRITATION. CHRONIC EFFECTS OF OVEREXPOSURE MAY INCLUDE DAMAGE TO KIDNEYS, LIVER, LUNGS, BLOOD, OR CENTRAL NERVOUS SYSTEM.

TARGET ORGANS: LIVER, KIDNEYS, EYES, UPPER RESPIRATORY SYSTEM, CENTRAL NERVOUS SYSTEM

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE IDENTIFIED

ROUTES OF ENTRY: INHALATION, INGESTION, EYE CONTACT, SKIN CONTACT

EMERGENCY AND FIRST AID PROCEDURES: CALL A PHYSICIAN.

IF **SWALLOWED**, DO NOT INDUCE VOMITING.

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

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

WITH WATER.
SOME EXPERIMENTS WITH TEST ANIMALS INDICATED THAT
THIS SUBSTANCE MAY BE ANTICIPATED TO BE A
CARCINOGEN.

6 - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HEAT, FLAME, OTHER SOURCES OF IGNITION

INCOMPATIBLES: STRONG OXIDIZING AGENTS, ALKALI METALS, ALUMINUM

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

7 - SPILL AND DISPOSAL PROCEDURES

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: U210 (TOXIC WASTE)

8 - PROTECTIVE EQUIPMENT

VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

b RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS UP TO 50 PPM, A CHEMICAL CARTRIDGE RESPIRATOR WITH > ORGANIC VAPOR CARTRIDGE IS RECOMMENDED. ABOVE THIS LEVEL, A SELF-CONTAINED BREATHING APPARATUS IS RECOMMENDED.

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

RECOMMENDED.

9 - STORAGE AND HANDLING PRECAUTIONS

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

SPECIAL PRECAUTIONS: KEEP CONTAINER TIGHTLY CLOSED. STORE IN SECURE POISON AREA. STORE IN A COOL, WELL-VENTILATED AREA AWAY FROM SOURCES OF HEAT, FLAME, OR IGNITION.

10 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: TETRACHLOROETHYLENE (AIR ONLY)

HAZARD CLASS ORM-A

UN/NA UN1897

LABELS NONE

REPORTABLE QUANTITY 1 LBS.

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME TETRACHLOROETHYLENE

HAZARD CLASS 6.1

UN/NA UN1897

LABELS HARMFUL - STOW AWAY FROM FOOD STUFFS