3. CHEMICAL AND PHYSICAL INFORMATION

3.1 CHEMICAL IDENTITY

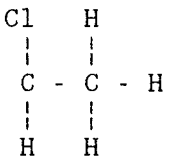
The synonyms, and identification numbers for l,l-dichloroethane are listed in Table 3-l.

3.2 PHYSICAL AND CHEMICAL PROPERTIES

Important physical and chemical properties of l,l-dichloroethane are listed in Table 3-2.

3. CHEMICAL AND PHYSICAL INFORMATION

TABLE 3-1. Chemical Identity of 1,1-Dichloroethane

	Value	Reference
Chemical name	1,1-Dichloroethane	CAS 1988
Synonyms	alpha alpha-Dichloroethane; asymmetrical dichloroethane; chlorinated hydrochloric ether; S-dichloroethane; Dutch oil; ethane, 1,1,-dichloro-(9CI); ethylidene chloride; ethylidene dichloride; 1,1-ethylidene dichloride	Grayson 1978; Weiss 1986
Trade names	No data	
Chemical formula	$C_2H_4Cl_2$	Weiss 1986; Windholz 1983
Chemical structure		
Identification numbers:		
CAS registry	75-34-3	Grayson 1978
NIOSH RTECS	KI0175000	HSDB 1988
EPA hazardous waste	U076	HSDB 1988
OHM-TADS	No data	
DOT/UN/NA/IMCO	DOT 2362; UN 2362; IMCO 3.2	HSDB 1988; Weiss 1986
HSDB	64	HSDB 1988
NCI	No data	
STCC	No data	

CAS = Chemical Abstracts Services: NIOSH = National Institute for Occupational Safety and Health; RTECS = Registry of Toxic Effects of Chemical Substances; EPA = Environmental Protection Agency; OHM/TADS = Oil and Hazardous Materials/Technical Assistance Data System; DOT/UN/NA/IMCO = Department of Transportation/United Nations/North America/International Maritime Dangerous Goods Code; HSDB = Hazardous Substance Data Bank; NCI = National Cancer Institute.

TABLE 3-2. Physical and Chemical Properties of 1,1-Dichloroethane

Property	Value	Reference
Molecular weight	98.97	Windholz 1983
Color	Colorless	
Physical state	Liquid	Weiss 1986
Melting point	-96.7°C	Grayson 1978
Boiling point	57.3°C	Grayson 1978; Windholz 1983
Density at 20°C	1.1747 g/cm^3	Grayson 1978
Odor	Aromatic ethereal; chloroform-like	
Odor threshold:		
Air	120 ppm; 200 ppm	Verschueren 1983
Water	No data	
Solubility:		
Water at 20°C	0.55 g/100 g	Grayson 1978
Organic solvents	Miscible with most organic solvents, including other chlorinated solvents	
Partition coefficients:		
log K_{ow}	1.79	EPA 1985
log K_{oc}	1.76	EPA 1985
Vapor pressure at 20°C	182 mmHg	EPA 1985
at 25°C	230 mmHg	HSDB 1988
Henry's law constant	4.2×10^{-2} atm-m^3/mol	EPA 1985
Autoignition temperature	457.8°C	HSDB 1988; Weiss 1986
Flashpoint:		
Closed cup	-8.33°C	ACGIH 1986; HSDB 1988;
Open cup	-5.56°C	NIOSH 1985
Flammability limits	Lower 5.6%; upper 11.4%	Weiss 1986
Conversion factors	1 ppm x 4.05 = 1 mg/m^3 1 mg/m^3 x 0.25 = 1 ppm	