3. CHEMICAL AND PHYSICAL INFORMATION

3.1 CHEMICAL IDENTITY

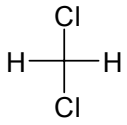
Information regarding the chemical identity of methylene chloride is located in Table 3-1. Methylene chloride is a halogenated hydrocarbon. It is also commonly known as dichloromethane.

Table 3-1 lists common synonyms, trade names, and other pertinent identification information for methylene chloride.

3.2 PHYSICAL AND CHEMICAL PROPERTIES

Information regarding the physical and chemical properties of methylene chloride is located in Table 3-2. Methylene chloride is a colorless liquid with a sweet, pleasant odor.

Table 3-1. Chemical Identity of Methylene Chloride

Characteristic	Information	Reference
Chemical Name	Methylene chloride	Lide 1994
Synonyms	Dichloromethane	Lide 1994
Registered trade name(s)	Narkotil; Solaesthin; Solmethine; and others	OHM/TADS 1998
Chemical formula	CH_2Cl_2	Lide 1994
Chemical structure		Lide 1994
Identification numbers:		
CAS	75-09-2	Lide 1994
NIOSH RTECS	PA8050000	RTECS 1999
EPA hazardous waste	U080, F002	Lewis 1996
OHM/TADS	7217234	OHM/TADS 1998
DOT/UN/NA/IMCO shipping	UN1593, IMCO 6.1	HSDB 1999
HSDB	66	HSDB 1999
NCI	C50102	HSDB 1999

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

Table 3-2. Physical and Chemical Properties of Methylene Chloride

Property	Information	Reference
Molecular weight	84.93	Lide 1994
Color	Colorless	Lewis 1996
Physical state	Liquid	Lide 1994
Melting point	-95.1 EC	Weast 1985
Boiling point	40 EC	Lide 1994
Density:		
at 25 EC	1.3182 g/mL	Lide 1994
Vapor density	2.93 (Air =1)	Verscheuren 1983
Odor	Sweet, pleasant	Verschueren 1983
Odor threshold:		
Water	9.1 ppm	Amoore and Hautala 1983
Air	540–2,160 mg/m^3 (160–620 ppm)	Ruth 1986
Solubility:		
Water at 20 EC	20,000 mg/L	Verschueren 1983
at 25 EC	16,700 mg/L	Verschueren 1983
Organic solvent(s)	Soluble in alcohol, ether, acetone, chloroform, and carbon tetrachloride	Lewis 1996
Partition coefficients:		
Log K_{ow}	1.3	Hansch and Leo 1979
Log K_{oc}	1.4	Roy and Griffin 1982
Vapor pressure:		
at 20 EC	349 mmHg	Verscheuren 1983
at 30 EC	500 mmHg	Verscheuren 1983
Henry's law constant	2.03x10^{-3} atm-m^3/mol at 25 EC	EPA 1982e
Autoignition temperature	1,139 EF (615 EC)	Lewis 1996
Flashpoint	Nonflammable	Sax and Lewis 1987
Flammability limits	Nonflammable	Sax and Lewis 1987
Coversion factors	1 mg/m^3=0.28 ppm	WHO 1996
	1 ppm=3.53 mg/m^3	WHO 1996
Explosive limits	Not explosive	Sax and Lewis 1987