

Toxicity Values for the TEACH Chemical Summary

Chemical Name: Vinyl Chloride

Tox Value	Link	Date Last Revised	Value	Critical Effect(s)	Children's Studies?	Uncertainty Factors and Other Info
RfD	www.epa.gov/iris/subst/1001.htm	8/07/2000	3E-3 mg/kg-day	Liver cell polymorphism	One supporting	UF=30: 10 for sensitive individuals and 3 for animal to human extrapolation; MF=1
RfC	www.epa.gov/iris/subst/1001.htm	8/07/2000	1E-1 mg/m ³	Liver cell polymorphism	Three supporting	UF=30: 10 for sensitive individuals and 3 for animal to human extrapolation; MF=1
Cancer Oral Slope Factor	www.epa.gov/iris/subst/1001.htm	8/07/2000	Continuous lifetime adult exposure (mg/kg-day) LMS=7.2E-1; LD10=7.5E-1	Liver angiosarcoma, hepatocellular carcinoma, and neoplastic nodules	Four supporting animal studies	Cancer classification: A, known human carcinogen Extrapolation Methods: Linearized multistage (LMS) and LED 10/linear method
			Continuous lifetime exposure from birth (mg/kg-day) LMS=1.4; LD10=1.5			
Cancer Drinking Water Unit Risk	www.epa.gov/iris/subst/1001.htm	8/07/2000	Continuous lifetime adult exposure (g/L) LMS=2.1E-5; LD10=2.1E-5			Extrapolation Methods: Linearized multistage and LED 10/linear method
			Continuous lifetime exposure from birth (g/L) LMS=4.2E-5; LD10=4.2E-5			
Drinking Water Concentrations at Specified Risk Levels	www.epa.gov/iris/subst/1001.htm	8/07/2000	<u>E-4 (1 in 10,000)</u> 4.8 g/L (adult exposure); 2.4 g/L (exposure from birth) <u>E-5 (1 in 100,000)</u> 4.8E-1 g/L (adult); 2.4E-1 g/L (birth) <u>E-6 (1 in 1,000,000)</u> 4.8E-2 g/L (adult); 2.4E-2 g/L (birth)			
Cancer Inhalation Unit Risk	www.epa.gov/iris/subst/1001.htm	8/07/2000	Continuous lifetime adult exposure (g/m ³) LMS=4.4E-6; LD10=4.4E-6			Extrapolation Methods: Linearized multistage (LMS) and LED 10/linear method

			Continuous lifetime exposure from birth (g/m ³) LMS=8.8E-5; LD10=8.8E-5			
Air Concentrations at Specified Risk Levels	www.epa.gov/iris/subst/1001.htm	8/07/2000	<u>E-4 (1 in 10,000)</u> 23 g/m ³ <u>E-5 (1 in 100,000)</u> 2.3 g/m ³ <u>E-6 (1 in 1,000,000)</u> 2.3 E-1 g/m ³			
MRL	www.atsdr.cdc.gov/mrls.html	09/97	Inhalation Acute = 0.5 ppm	Developmental		Factor = 100
			Inhalation Int.= 0.03 ppm	Hepatic		Factor = 300
			Oral Acute = 0.00002 mg/kg-day	Hepatic		Factor = 1000
MCL (drinking water)	www.epa.gov/safewater/mcl.html#mcls	July 2002	0.002 mg/L	Increased Risk of Cancer		Sources: Leaching from PVC pipes; discharge from plastic factories
MCLG (drinking water)	same as MCL	July 2002	Zero			
Drinking Water Advisories (10-kg child)	www.epa.gov/ost/drinking/standards/dwstandards.pdf	Winter 2004	1 day - 3mg/L 10 day - 3mg/L			