

## CHAPTER 7. REGULATIONS AND GUIDELINES

Pertinent international and national regulations, advisories, and guidelines regarding 1,2-dichloroethane in air, water, and other media are summarized in Table 7-1. This table is not an exhaustive list, and current regulations should be verified by the appropriate regulatory agency.

ATSDR develops MRLs, which are substance-specific guidelines intended to serve as screening levels by ATSDR health assessors and other responders to identify contaminants and potential health effects that may be of concern at hazardous waste sites. See Section 1.3 and Appendix A for detailed information on the MRLs for 1,2-dichloroethane.

**Table 7-1. Regulations and Guidelines Applicable to 1,2-Dichloroethane**

Agency	Description	Information	Reference
<b>Air</b>			
EPA	RfC	Not evaluated	<a href="#">IRIS 1987</a>
	Provisional peer-reviewed toxicity values		<a href="#">EPA 2010</a>
	Provisional chronic RfC	0.007 mg/m <sup>3</sup> (0.0017 ppm)	
	Provisional subchronic RfC	0.07 mg/m <sup>3</sup> (0.017 ppm)	
WHO	Air quality guidelines	0.7 mg/m <sup>3</sup> <sup>a</sup>	<a href="#">WHO 2000</a>
<b>Water &amp; Food</b>			
EPA	Drinking water standards and health advisories		<a href="#">EPA 2018c</a>
	1-Day health advisory (10-kg child)	0.7 mg/L	
	10-Day health advisory (10-kg child)	0.7 mg/L	
	Lifetime health advisory	No data	
	10 <sup>-4</sup> Cancer risk	0.04 mg/L	
	National primary drinking water regulations		<a href="#">EPA 2009</a>
	MCL	0.005 mg/L	
	MCLG	0 mg/L	
	RfD	Not evaluated	<a href="#">IRIS 1987</a>
	Provisional peer-reviewed toxicity values		<a href="#">EPA 2010</a>
	Provisional subchronic RfD	0.02 mg/kg/day	
WHO	Drinking water quality guidelines	0.03 mg/L	<a href="#">WHO 2022</a>

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Agency	Description	Information	Reference
FDA	Allowable level in bottled water	0.005 mg/L	<a href="#">FDA 2017</a>
	Concentration limit in pharmaceutical products	5 ppm	<a href="#">FDA 2018</a>
	Substances added to food (formerly EAFUS)	Allowed under certain color, food additive and food contact substance regulations with limitations	<a href="#">FDA 2022</a>
	Food additive levels	Not to exceed:	
	Residues from use as solvent in extraction process of:		
	Whole fish protein concentrate	5 ppm	<a href="#">FDA 2021a</a>
	Modified hop extract	150 ppm	<a href="#">FDA 2021a</a>
	Spice oleoresins	30 ppm	<a href="#">FDA 2021b</a>
	Animal byproducts for use in animal feeds	300 ppm	<a href="#">FDA 2021c</a>
	Use in flume water for washing sugar beets	0.2 ppm	<a href="#">FDA 2021b</a>
<b>Cancer</b>			
HHS	Carcinogenicity classification	Reasonably anticipated to be a human carcinogen	<a href="#">NTP 2021</a>
EPA	Carcinogenicity classification	B2 <sup>b</sup>	<a href="#">IRIS 1987</a>
	Inhalation unit risk	2.6x10 <sup>-5</sup> per µg/m <sup>3</sup>	
	Oral slope factor	9.1x10 <sup>-2</sup> per mg/kg/day	
IARC	Carcinogenicity classification	Group 2B <sup>c</sup>	<a href="#">IARC 1999</a>
<b>Occupational</b>			
OSHA	PEL (8-hour TWA) for general industry, shipyards, and construction	50 ppm <sup>d</sup>	<a href="#">OSHA 2021a</a> , <a href="#">2021b</a> , <a href="#">2021c</a>
	Ceiling concentration for general industry	100 ppm <sup>e</sup> , 200 ppm (peak)	<a href="#">OSHA 2021a</a>
NIOSH	REL (up to 10-hour TWA)	1 ppm <sup>d</sup>	<a href="#">NIOSH 2019</a>
	STEL	2 ppm	
	IDLH	50 ppm	
<b>Emergency Criteria</b>			
EPA	AEGLs-air	No data	<a href="#">EPA 2018d</a>

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Agency	Description	Information	Reference
DOE	PACs-air		<a href="#">DOE 2018a</a>
	PAC-1 <sup>f</sup>	50 ppm	
	PAC-2 <sup>f</sup>	200 ppm	
	PAC-3 <sup>f</sup>	300 ppm	

<sup>a</sup>24-hour TWA.

<sup>b</sup>B2: probable human carcinogen.

<sup>c</sup>Group 2B: possibly carcinogenic to humans.

<sup>d</sup>Potential occupational carcinogen.

<sup>e</sup>Not to exceed this concentration at any time during an 8-hour shift, except for up to 5 minutes in any 3 hours, up to the acceptable peak concentration.

<sup>f</sup>Definitions of PAC terminology are available from DOE (2018b).

AEGL = acute exposure guideline levels; DOE = Department of Energy; EAFUS = Everything Added to Food in the United States; EPA = U.S. Environmental Protection Agency; FDA = Food and Drug Administration; HHS = Department of Health and Human Services; IARC = International Agency for Research on Cancer; IDLH = immediately dangerous to life or health; IRIS = Integrated Risk Information System; MCL = maximum contaminant level; MCLG = maximum contaminant level goal; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PAC = protective action criteria; PEL = permissible exposure limit; REL = recommended exposure limit; RfC = inhalation reference concentration; RfD = oral reference dose; STEL = short-term exposure limit; TWA = time-weighted average; WHO = World Health Organization