CHAPTER 7. REGULATIONS AND GUIDELINES

Pertinent international and national regulations, advisories, and guidelines regarding 1,2-dichloroethene 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-dichloroethene.

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

Agency	Description	Information	Reference
	Air		
EPA	RfC	Information reviewed but value not estimated	IRIS 2010a, 2010b
WHO	Air quality guidelines	No data	WHO 2010
	Water & Food		
EPA	Drinking water standards and health advisories		EPA 2018a
	1-Day health advisory (10-kg child)		
	cis-1,2-Dichloroethene	4 mg/L	
	trans-1,2-Dichloroethene	20 mg/L	
	10-Day health advisory (10-kg child)		
	cis-1,2-Dichloroethene	3 mg/L	
	trans-1,2-Dichloroethene	2 mg/L	
	DWEL		
	cis-1,2-Dichloroethene	0.07 mg/L	
	trans-1,2-Dichloroethene	0.7 mg/L	
	Lifetime health advisory		
	cis-1,2-Dichloroethene	0.01 mg/L	
	trans-1,2-Dichloroethene	0.1 mg/L	
	10^{-4} Cancer risk	No data	
	National primary drinking water regulations		EPA 2009b
	cis-1,2-Dichloroethene		
	MCL	0.07 mg/L	
	Public health goal	0.07 mg/L	
	trans-1,2-Dichloroethene		
	MCL	0.1 mg/L	
	Public health goal	0.1 mg/L	

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

Agency	Description	Information	Reference
	RfD		
	cis-1,2-Dichloroethene	0.002 mg/kg/day	IRIS 2010a
	trans-1,2-Dichloroethene	0.02 mg/kg/day	IRIS 2010b
	Provisional Peer Reviewed Toxicity Values		EPA 2011c
	cis-1,2-Dichloroethene		
	Provisional subchronic RfD	$2x10^{-2}$ mg/kg/day	
WHO	Drinking water quality guidelines		WHO 2017
	1,2-Dichloroethene		
	guideline value	0.05 mg/L (50 µg/L)	
	TDI	17 µg/kg body weight	
FDA	Substances added to food[a]	Not listed	FDA 2022b
	Indirect food additives regulations 1,2-Dichloroethene (mixed isomers)	Permitted as a component of adhesives	FDA 1996
	Allowable level in bottled water		FDA 2017
	cis-1,2-Dichloroethene	0.07 mg/L	
	trans-1,2-Dichloroethene	0.1 mg/L	
	Cancer		
HHS	Carcinogenicity classification	No data	NTP 2021
EPA	Carcinogenicity classification	Inadequate information to assess carcinogenic potential	IRIS 2010a, 2010b
IARC	Carcinogenicity classification	No data	IARC 2022
	Occupational		
OSHA	PEL (8-hour TWA) for general industry, shipyards and construction		OSHA 2020a, 2020b, 2020c
	1,2-Dichloroethene	200 ppm (790 mg/m^3)	
NIOSH	REL (up to 10-hour TWA)		NIOSH 2019
	1,2-Dichloroethene	200 ppm (790 mg/m^3)	
	IDLH		NIOSH 1994
	1,2-Dichloroethene	1,000 ppm	
	Emergency Criteria		
EPA	AEGLs-air		EPA 2018b
	cis-1,2-Dichloroethene		
	AEGL 1[b]		
	10-minute	140 ppm	
	30-minute	140 ppm	
	60-minute	140 ppm	
	4-hour	140 ppm	
	8-hour	140 ppm	
	AEGL 2[b]		
	10-minute	500 ppm	

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

Agency	Description	Information	Reference
	30-minute	500 ppm	
	60-minute	500 ppm	
	4-hour	340 ppm	
	8-hour	230 ppm	
	AEGL 3[b]		
	10-minute	850 ppm	
	30-minute	850 ppm	
	60-minute	850 ppm	
	4-hour	620 ppm	
	8-hour	310 ppm	
	trans-1,2-Dichloroethene		
	AEGL 1[b]		
	10-minute	280 ppm	
	30-minute	280 ppm	
	60-minute	280 ppm	
	4-hour	280 ppm	
	8-hour	280 ppm	
	AEGL 2[b]		
	10-minute	1,000 ppm	
	30-minute	1,000 ppm	
	60-minute	1,000 ppm	
	4-hour	690 ppm	
	8-hour	450 ppm	
	AEGL 3[b]		
	10-minute	1,700 ppm	
	30-minute	1,700 ppm	
	60-minute	1,700 ppm	
	4-hour	1,200 ppm	
	8-hour	620 ppm	
DOE	PACs-air		DOE 2018a
	1,2-Dichloroethene		
	PAC-1[c]	140 ppm	
	PAC-2[c]	500 ppm	
	PAC-3[c]	850 ppm	
	cis-1,2-Dichloroethene		
	PAC-1[c]	140 ppm	
	PAC-2[c]	500 ppm	
	PAC-3[c]	850 ppm	

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

Agency	Description	Information	Reference
	trans-1,2-Dichloroethene		
	PAC-1[c]	280 ppm	
	PAC-2[c]	1,000 ppm	
	PAC-3[c]	1,700 ppm	

[a]The Substances Added to Food inventory replaces EAFUS and contains the following types of ingredients: food and color additives listed in FDA regulations, flavoring substances evaluated by FEMA or JECFA, GRAS substances listed in FDA regulations, substances approved for specific uses in food prior to September 6, 1958, substances that are listed in FDA regulations as prohibited from use in food, delisted color additives, and some substances "no longer FEMA GRAS".
[b]Definitions of AEGL terminology are available from U.S. Environmental Protection Agency (EPA 2018c).
[c]Definitions of PAC terminology are available from U.S. Department of Energy (DOE 2018b).

AEGL = acute exposure guideline level; DOE = Department of Energy; DWEL = drinking water equivalent level; EAFUS = Everything Added to Food in the United States; EPA = Environmental Protection Agency; FDA = Food and Drug Administration; FEMA = Flavor and Extract Manufacturers Association of the United States; GRAS = generally recognized as safe; 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; JECFA = Joint FAO/WHO Expert Committee on Food Additives; MCL = maximum contaminant level; 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; TDI = tolerable daily intake; TWA = time-weighted average; WHO = World Health Organization