

CHAPTER 7. REGULATIONS AND GUIDELINES

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

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

Agency	Description	Information	Reference
Air			
EPA	RfC	2×10^{-1} mg/m ³ (0.05 ppm)	IRIS 2005
WHO	Air quality guidelines	Not listed	WHO 2010
Water & Food			
EPA	Drinking water standards and health advisories		EPA 2018a
	1-Day health advisory (10-kg child)	2 mg/L	
	10-Day health advisory (10-kg child)	1 mg/L	
	DWEL	2 mg/L	
	Lifetime health advisory	0.4 mg/L	
	10 ⁻⁴ Cancer risk	0.006 mg/L	
	National primary drinking water regulations		EPA 2009b
	MCL and public health goal	0.007 mg/L	
	RfD	5×10^{-2} mg/kg/day	IRIS 2005
WHO	Drinking water quality guidelines	Not established	WHO 2017
FDA	Substances Added to Food	Not listed ^a	FDA 2020c
	List of Indirect Additives Used in Food Contact Substances	Approved under indirect additives regulations	FDA 2019
	Allowable level in bottled water	0.007 mg/L	FDA 2017
Cancer			
HHS	Carcinogenicity classification	No data	NTP 2016
EPA	Carcinogenicity classification	Group C ^{b,c}	IRIS 2005
IARC	Carcinogenicity classification	Group 2B ^d	IARC 2019
Occupational			
ACGIH	TLV (TWA)—air	5 ppm (20 mg/m ³)	ACGIH 2001
OSHA	PEL (8-hour TWA) for general industry, shipyards, and construction—air	No data	OSHA 2019a , 2019b , 2019c

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

Agency	Description	Information	Reference
NIOSH	REL (up to 10-hour TWA)	Ca ^e	NIOSH 2019
	IDLH	Ca ^e	
Emergency Criteria			
EPA	AEGLs-air	Not listed	EPA 2018b
DOE	PACs-air		DOE 2018a
	PAC-1 ^f	45 ppm	
	PAC-2 ^f	500 ppm	
	PAC-3 ^f	1,000 ppm	

^aThe 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 in food, delisted color additives, and some substances "no longer FEMA GRAS".

^bGroup C: possible human carcinogen.

^cSuggestive evidence of carcinogenicity via the inhalation route, but not sufficient evidence to assess human carcinogenic potential following inhalation exposure. Data are inadequate for an assessment of human carcinogenic potential via the oral route.

^dGroup 2B: possibly carcinogenic to humans.

^ePotential occupational carcinogen.

^fDefinitions of PAC terminology are available from U.S. Department of Energy (DOE 2018b).

ACGIH = American Conference of Governmental Industrial Hygienists; AEGL = acute exposure guideline levels; 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 concentration; 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; TLV = threshold limit values; TWA = time-weighted average; WHO = World Health Organization