CHAPTER 7. REGULATIONS AND GUIDELINES

Pertinent international and national regulations, advisories, and guidelines regarding chloromethane 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 chloromethane.

Table 7-1. Regulations and Guidelines Applicable to Chloromethane

Agency	Description	Information	Reference
	Air		
EPA	RfC	0.09 mg/m^3 (0.04 ppm)	EPA 2001
	Provisional peer reviewed toxicity values		EPA 2012b
	Subchronic provisional RfC	3 mg/m^3 (1 ppm)	
WHO	Air quality guidelines	0.018 mg/m^3 (0.009 ppm)	WHO 2000
	Water & Food		
EPA	Drinking water standards		EPA 2018a
	1-day health advisory for a 10-kg child	9 mg/L	
	10-day health advisory for a 10-kg child	0.4 mg/L	
	Lifetime health advisory	No data	
	National primary drinking water regulations	No data	EPA 2009
	RfD	No data	EPA 2001
WHO	Drinking water quality guidelines	No data	WHO 2022
FDA	Substances Added to Food[a]	No data	FDA 2022
	Cancer		
HHS	Carcinogenicity classification	No data	NTP 2021
EPA	Carcinogenicity classification	Group D[b]	EPA 2001
IARC	Carcinogenicity classification	Group 3[c]	IARC 1999
NIOSH	Carcinogenicity classification	Potential occupational carcinogen[d]	NIOSH 2019
	Occupational		
OSHA	PEL (8-hour TWA) for general industry and shipyards	100 ppm	OSHA 2021a, 2021b
	Ceiling PEL for general industry	200 ppm; 300 ppm maximum peak (5 minutes in any 3 hours)	OSHA 2021a

Table 7-1. Regulations and Guidelines Applicable to Chloromethane

Agency	Description	Information	Reference
NIOSH	REL (up to 10-hour TWA)	Lowest feasible concentration[d]	NIOSH 2018, 2019
	Emergency Criteria		
EPA	AEGLs-air		EPA 2018b
	AEGL 1[e]		
	10-minute	NR[f]	
	30-minute	NR	
	60-minute	NR	
	4-hour	NR	
	8-hour	NR	
	AEGL 2[e]		
	10-minute	1,100 ppm	
	30-minute	1,100 ppm	
	60-minute	910 ppm	
	4-hour	570 ppm	
	8-hour	380 ppm	
	AEGL 3[e]		
	10-minute	3,800 ppm	
	30-minute	3,800 ppm	
	60-minute	3,000 ppm	
	4-hour	1,900 ppm	
	8-hour	1,300 ppm	
DOE	PACs		DOE 2018a
	PAC-1[g]	150 ppm	
	PAC-2[g]	910 ppm	
	PAC-3[g]	3,000 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]Group D: Not classifiable as to its human carcinogenicity.
[c]Group 3: Not classifiable as to its carcinogenicity to humans.
[d]NIOSH recommends wearing the most protective respirators for chloromethane at any detectable concentration.
[e]Definitions of AEGL terminology are available from U.S. EPA (2018c).
[f]NR: not recommended due to insufficient data.
[g]Definitions of PAC terminology are available from U.S. Department of Energy (DOE 2018b).

AEGL = acute exposure guideline levels; HHS = Department of Health and Human Services; DOE = Department of Energy; 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; IRIS = Integrated Risk Information System; JECFA = Joint FAO/WHO Expert Committee on Food Additives; 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; TWA = time-weighted average; WHO = World Health Organization