CHAPTER 7. REGULATIONS AND GUIDELINES

Pertinent international and national regulations, advisories, and guidelines regarding 1,2-dibromo-3-chloropropane 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-dibromo-3-chloropropane.

Table 7-1. Regulations and Guidelines Applicable to 1,2-Dibromo-3-Chloropropane

Agency	Description	Information	Reference
	Air		
EPA	RfC	$2x10^{-4}$ mg/m^3 [a]	IRIS 2003
WHO	Air quality guidelines	No data	WHO 2010
	Water & Food		
EPA	Drinking water health advisories		EPA 2012
	1-Day (10 kg child)	0.2 mg/L	
	10-Day (10 kg child)	0.05 mg/L	
	mg/L at 10^{-4} cancer risk	0.003	
	National primary drinking water regulations		EPA 2009
	MCL	0.0002 mg/L[b]	
	Public health goal	Zero	
	RfD	No data	IRIS 2003
WHO	Drinking water quality guidelines		WHO 2017
	Guideline value	0.001 mg/L (1 µg/L)[c]	
FDA	EAFUS	No data[d]	FDA 2013
	Cancer		
HHS	Carcinogenicity classification	Reasonably anticipated to be a human carcinogen[e]	NTP 2016
EPA	Carcinogenicity classification	Not evaluated	IRIS 2003
IARC	Carcinogenicity classification	Group 2B[f,g]	IARC 1999
	Occupational		
OSHA	PEL (8-hour TWA) for occupational exposure	1 ppb[h]	OSHA 2016a, 2016b, 2016c
NIOSH	REL (up to 10-hour TWA)	No data	NIOSH 2016

Table 7-1. Regulations and Guidelines Applicable to 1,2-Dibromo-3-Chloropropane

Agency	Description	Information	Reference
	Emergency Criteria		
EPA	AEGLs-air	No data	EPA 2016
DOE	PACs-air		DOE 2016a
	PAC-1[i]	0.003 ppm	
	PAC-2[i]	2.2 ppm	
	PAC-3[i]	4.3 ppm	

[a]Based on testicular effects found in a 13-week subchronic rabbit inhalation study.
[b]Potential health effects from long-term exposure above the MCL: reproductive difficulties; increased risk of cancer.
[c]Derivation based on a linearized multistage model applied to the data on the incidence of stomach, kidney, and liver tumors in the male rat in a 104-week dietary study. Guideline value should be protective for reproductive toxicity.
[d]The EAFUS list of substances contains ingredients added directly to food that FDA has either approved as food additives or listed or affirmed as GRAS.
[e]Based on sufficient evidence of carcinogenicity from studies in experimental animals.
[f]Group 2B: Possibly carcinogenic to humans.
[g]Based on sufficient evidence for carcinogenicity in experimental animals and inadequate evidence in humans.
[h]Employer shall ensure no employee is exposed to eye or skin contact with dibromochloropropane.
[i]Definitions of PAC terminology are available from the U.S. Department of Energy (DOE 2016b).

AEGL = acute exposure guideline levels; AIHA = American Industrial Hygiene Association; DOE = Department of Energy; EAFUS = Everything Added to Food in the United States; EPA = Environmental Protection Agency; ERPG = emergency response planning guidelines; FDA = Food and Drug Administration; GRAS = generally recognized as safe; HHS = Department of Health and Human Services; IARC = International Agency for Research on Cancer; IRIS = Integrated Risk Information System; 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