

CHAPTER 7. REGULATIONS AND GUIDELINES

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

Table 7-1. Regulations and Guidelines Applicable to Nitrobenzene

Agency	Description	Information	Reference
Air			
EPA	RfC	9×10^{-3} mg/m ³ (2×10^{-3} ppm)	IRIS 2009
WHO	Air quality guidelines	No data	WHO 2010
Water & Food			
EPA	Drinking water standards and health advisories	Not listed	EPA 2018a
	National primary drinking water regulations	Not listed	EPA 2009b
	RfD	2×10^{-3} mg/kg/day	IRIS 2009
WHO	Drinking water quality guidelines	Guidelines not established ^a	WHO 2022 , WHO 2009
FDA	Substances added to food (formerly EAFUS)	Not listed	FDA 2022
Cancer			
HHS	Carcinogenicity classification	Reasonably anticipated to be a human carcinogen	NTP 2021
EPA	Carcinogenicity classification	Likely to be carcinogenic to humans	IRIS 2009
	Inhalation unit risk	4×10^{-5} per $\mu\text{g}/\text{m}^3$	
IARC	Carcinogenicity classification	Group 2B ^b	IARC 1996
Occupational			
OSHA	PEL (8-hour TWA) for general industry, shipyards, and construction	1 ppm (5 mg/m ³) ^c	OSHA 2021a , 2021b , 2021c
NIOSH	REL (up to 10-hour TWA) IDLH	1 ppm (5 mg/m ³) ^c 200 ppm	NIOSH 2019

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Agency	Description	Information	Reference
Emergency Criteria			
EPA	AEGLs-air	No data	EPA 2018b
DOE	PACs-air		DOE 2018a
	PAC-1 ^d	3 ppm	
	PAC-2 ^d	20 ppm	
	PAC-3 ^d	200 ppm	

^aReason: nitrobenzene is rarely found in drinking water at concentrations of health concern.

^bGroup 2B: possibly carcinogenic to humans.

^cSkin notation.

^dDefinitions of PAC terminology are available from U.S. Department of Energy (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; 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