

## CHAPTER 7. REGULATIONS AND GUIDELINES

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

**Table 7-1. Regulations and Guidelines Applicable to Acetone**

Agency	Description	Information	Reference
<b>Air</b>			
EPA	RfC	Value not estimated	<a href="#">EPA 2003</a>
WHO	Air quality guidelines	No data	<a href="#">WHO 2010</a>
<b>Water &amp; Food</b>			
EPA	Drinking water standards and health advisories	Not listed	<a href="#">EPA 2018a</a>
	National primary drinking water regulations	Not listed	<a href="#">EPA 2009</a>
	RfD	0.9 mg/kg/day	<a href="#">EPA 2003</a>
WHO	Drinking water quality guidelines	No data	<a href="#">WHO 2017</a>
FDA	Substances added to food <sup>a</sup>	Permitted under several color additive, indirect, and secondary direct food additive regulations	<a href="#">FDA 2022</a>
<b>Cancer</b>			
HHS	Carcinogenicity classification	No data	<a href="#">NTP 2021</a>
EPA	Carcinogenicity classification	Data are inadequate for an assessment of the human carcinogenic potential	<a href="#">EPA 2003</a>
IARC	Carcinogenicity classification	No data	<a href="#">IARC 2021</a>
<b>Occupational</b>			
OSHA	PEL (8-hour TWA) for general industry, shipyards, and construction	1000 ppm (2400 mg/m <sup>3</sup> )	<a href="#">OSHA 2018a</a> <a href="#">29 CFR 1910.1000 Table Z-1</a> ; <a href="#">OSHA 2018b</a> <a href="#">29 CFR 1915.1000 Table Z</a> ; <a href="#">OSHA 2018c</a> <a href="#">29 CFR 1926.55 Appendix A</a>
NIOSH	REL (up to 10-hour TWA)	250 ppm (590 mg/m <sup>3</sup> )	<a href="#">NIOSH 2019b</a>

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Agency	Description	Information	Reference
<b>Emergency Criteria</b>			
EPA	AEGLs-air		<a href="#">EPA 2018b</a>
	AEGL 1 <sup>b</sup>		
	10-minute	200 ppm	
	30-minute	200 ppm	
	60-minute	200 ppm	
	4-hour	200 ppm	
	8-hour	200 ppm	
	AEGL 2 <sup>b</sup>		
	10-minute	9,300 ppm <sup>c</sup>	
	30-minute	4,900 ppm <sup>c</sup>	
	60-minute	3,200 ppm <sup>c</sup>	
	4-hour	1,400 ppm	
	8-hour	950 ppm	
	AEGL 3 <sup>b</sup>		
	10-minute	16,000 ppm <sup>d</sup>	
30-minute	8,600 ppm <sup>c</sup>		
60-minute	5,700 ppm <sup>c</sup>		
4-hour	2,500 ppm		
8-hour	1,700 ppm		
DOE	PACs-air		<a href="#">DOE 2018a</a>
	PAC-1 <sup>e</sup>	470 mg/m <sup>3</sup>	
	PAC-2 <sup>e</sup>	7,600 mg/m <sup>3</sup>	
	PAC-3 <sup>e</sup>	14,000 mg/m <sup>3</sup>	

<sup>a</sup>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 (Generally Recognized As Safe) 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".

<sup>b</sup>Definitions of AEGL terminology are available from U.S. Environmental Protection Agency (EPA 2018c).

<sup>c</sup>Safety considerations against the hazard of explosion must be taken into account.

<sup>d</sup>Extreme safety considerations against the hazard of explosion must be taken into account.

<sup>e</sup>Definitions 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 = 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; RiC = inhalation reference concentration; RiD = oral reference dose; TWA = time-weighted average; WHO = World Health Organization