

## CHAPTER 7. REGULATIONS AND GUIDELINES

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

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

Agency	Description	Information	Reference
<b>Air</b>			
EPA	RfC	Not evaluated	<a href="#">IRIS 1988</a>
WHO	Air quality guidelines	Not listed	<a href="#">WHO 2010</a>
<b>Water &amp; Food</b>			
EPA	Drinking water standards and health advisories		<a href="#">EPA 2018a</a>
	DWEL	0.7 mg/L	
	10 <sup>-4</sup> cancer risk	0.3 mg/L	
	National primary drinking water regulations		<a href="#">EPA 2009c</a>
	Maximum contaminant level	0.006 mg/L	
	Public health goal	0	
	RfD	2x10 <sup>-2</sup> mg/kg/day	<a href="#">IRIS 1988</a>
WHO	Drinking water quality guidelines		<a href="#">WHO 2017</a>
	Guideline value	0.008 mg/L (8 µg/L)	
	Tolerable daily intake	25 µg/kg body weight	
FDA	Substances added to food <sup>a</sup>	Not listed	<a href="#">FDA 2020</a>
	Indirect additives used in food contact substances <sup>b</sup>	Allowed for some uses	<a href="#">FDA 2019a</a>
	Allowable level in bottled water	0.006 mg/L	<a href="#">FDA 2019b</a>
	Tolerable intake value (oral)	0.04 mg/kg/day	FDA 2001
<b>Cancer</b>			
HHS	Carcinogenicity classification	Reasonably anticipated to be a human carcinogen	<a href="#">NTP 2016</a>
EPA	Carcinogenicity classification	Group B2 <sup>c</sup>	<a href="#">IRIS 1988</a>
IARC	Carcinogenicity classification	Group 2B <sup>d</sup>	<a href="#">IARC 2013</a>

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Agency	Description	Information	Reference
<b>Occupational</b>			
OSHA	PEL (8-hour TWA) for general industry, shipyards, and construction	5 mg/m <sup>3</sup>	OSHA <a href="#">2019a</a> , <a href="#">2019b</a> , <a href="#">2019c</a>
NIOSH	REL (up to 10-hour TWA) STEL	5 mg/m <sup>3</sup> <sup>e</sup> 10 mg/m <sup>3</sup>	<a href="#">NIOSH 2019</a>
<b>Emergency Criteria</b>			
EPA	AEGLs-air	Not listed	<a href="#">EPA 2018b</a>
DOE	PACs-air		<a href="#">DOE 2018a</a>
	PAC-1 <sup>f</sup>	10 mg/m <sup>3</sup>	
	PAC-2 <sup>f</sup>	1,000 mg/m <sup>3</sup>	
	PAC-3 <sup>f</sup>	6,100 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 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."

<sup>b</sup>The Indirect Additives Used in Food Contact Substances list is a compilation of substances found in 21 CFR parts 175–178.

<sup>c</sup>Group B2: probable human carcinogen.

<sup>d</sup>Group 2B: possibly carcinogenic to humans.

<sup>e</sup>Potential occupational carcinogen.

<sup>f</sup>Definitions of PAC terminology are available from DOE (2018b).

AEGL = acute exposure guideline levels; CFR = Code of Federal Regulations; DEHP = di(2-ethylhexyl)phthalate; 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; 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; STEL = short-term exposure limit; TWA = time-weighted average; WHO = World Health Organization