

8. REGULATIONS AND ADVISORIES

Because of its potential to cause adverse health effects in exposed people, numerous regulations and advisories have been established for asbestos by various international, national, and state agencies. Such regulations and advisories control asbestos in various media, such as air and water, and also how it is contained, handled, disposed, etc.

Major regulations and advisories pertaining to asbestos are summarized in Table 8-1. Most states have adopted and enforce the regulations and guidelines set by national agencies. For example, with regard to emissions standards, most states follow the National Emission Standards for Hazardous Air Pollutants established by EPA (in Volume 40, Part 61 of the Code of Federal Regulations) for asbestos emissions. States may establish their own standards, but they are comparable to or more stringent than the ones set forth by EPA, OSHA, etc. (CELDS 1994). In addition, states may establish regulations for asbestos when federal regulations do not exist for a particular scenario (Kaplan 1993).

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Table 8-1. Regulations and Guidelines Applicable to Asbestos^a

Agency	Description	Information	References
<u>INTERNATIONAL</u>			
Guidelines:			
IARC	Carcinogenic classification	Group 1 ^b	IARC 2001
<u>NATIONAL</u>			
Regulations and guidelines			
a. Air			
ACGIH	TLV–TWA	0.1 f/mL	ACGIH 2000
EPA	Carcinogenic inhalation unit risk	$2.3 \times 10^{-1} \text{ (f/mL)}^{-1}$	IRIS 2001
	Carcinogenic classification NESHAP—HAP	Group A ^c	EPA 2000c 40CFR61.01(a)
NIOSH	REL (100-minute TWA in a 400 L sample); $f > 5 \mu\text{m}$ in length	0.1 f/mL	NIOSH 2001
OSHA	PEL (8-hour TWA)	0.1 f/mL	OSHA 2001a 29CFR1910.1001
	PEL (8-hour TWA) for construction	0.1 f/mL	OSHA 2001b 29CFR1926.1101
	PEL (excursion limit) averaged over a 30-minute sampling period for construction	1.0 f/mL	OSHA 2001b 29CFR1926.1101
	PEL (8-hour TWA) for shipyard	0.1 f/mL	OSHA 2001c 29CFR1915.1001
	PEL (excursion limit) averaged over a 30-minute sampling period for shipyard	1.0 f/mL	OSHA 2001c 29CFR1915.1001
USC	HAP		USC 2001c 42USC7412
b. Water			
EPA	Concentration at cancer risk of 10^{-4} for drinking water	700 MFL	EPA 2000a
	Human health for consumption of: Water and organism	7 MFL	EPA 1999a

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Table 8-1. Regulations and Guidelines Applicable to Asbestos^a (continued)

Agency	Description	Information	References
NATIONAL (cont.)			
EPA	MCL (f>10 µm in length) MCLG (f>10 µm in length)	7 MFL 7 MFL	EPA 2001a
USC	Clean Water Act—National Standards of Performance		USC 2001a 33USC1316
c. Food			
FDA	Indirect food additives: Adhesives and components of coatings		FDA 2000a 21CFR175.105 (c)(5)
	Indirect food additives: Polymers		FDA 2000b 21CFR177.2420 (b)
	Indirect food additives: Polymers—phenolic resins in molded articles		FDA 2000c 21CFR177.2410 (b)
d. Other			
ACGIH	Carcinogenic classification	A1 ^d	ACGIH 2000
CPSC	Test results on crayons—manufacturers will reformulate crayons using substitute ingredients to eliminate fibers within one year		CPSC 2001a
	Testing finds no asbestos fibers in children's chalk		CPSC 2001b
EPA	Asbestos—containing materials in schools; Asbestos abatement project		EPA 2000b 40CFR763
	CERCLA—reportable quantity	1 pound	EPA 1999b 40CFR302.4
	Toxic chemical release reporting; Community Right-to-Know—effective date	01/01/87	EPA 2001c 40CFR372.65(a)
USC	Congressional findings and purpose—implementation of appropriate response actions with respect to asbestos-containing material in the Nation's schools		USC 2001b 15USC2641

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Table 8-1. Regulations and Guidelines Applicable to Asbestos^a (continued)

Agency	Description	Information	References
DHHS	Carcinogen classification	Known to be a human carcinogen	NTP 2001
STATE			
Regulations and Guidelines			
a. Air			
Alabama	HAP		BNA 2001
Arizona	Research HAPs List		ADEQ 2001
California	Toxic air contaminant		Environmental Defense 2001
Colorado	HAP		BNA 2001
Hawaii	HAP		BNA 2001
Illinois	Toxic air contaminant		BNA 2001
Kansas	HAP		BNA 2001
Kentucky	HAP		BNA 2001
Louisiana	Toxic air pollutant Minimum emission rate	25.0 pounds/year	BNA 2001
Maryland	Toxic air pollutant		BNA 2001
Minnesota	HAP threshold De minimis level (tons/year)	Zero	BNA 2001
Missouri	Air contaminant De minimis emission level	0.007 tons/year	BNA 2001
Nebraska	HAP		BNA 2001
New York	HAP		BNA 2001
Rhode Island	HAP		BNA 2001
Vermont	Hazardous air contaminant Hazardous ambient air standards Annual average Action level	1.2x10 ⁻⁴ µg/m ³ 1x10 ⁻⁵ pounds/ 8 hours	BNA 2001
Washington	HAP—threshold level	4x10 ⁻⁵ f/mL	BNA 2001
Wyoming	HAP		BNA 2001

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Agency	Description	Information	References
<u>STATE (cont.)</u>			
b. Water			
Alabama	Primary drinking water standard MCL (f>10 µm in length)	7 MFL	BNA 2001
Alaska	Drinking water standard MCL (f>10 µm in length)	7 MFL	BNA 2001
Arizona	Safe drinking water MCL (f>10 µm in length)	7 MFL	BNA 2001
California	Primary MCL	7 MFL	California DHS 1999
Colorado	Groundwater standard	7 MFL	BNA 2001
	Primary drinking water regulation MCL (f>10 µm in length)	7 MFL	BNA 2001
Connecticut	Public drinking water standard MCL (f>10 µm in length)	7 MFL	BNA 2001
Florida	Drinking water standard MCL	7 MFL	BNA 2001
Georgia	Safe drinking water MCL (f>10 µm in length)	7 MFL	BNA 2001
Hawaii	MCL (f>10 µm in length)	7 MFL	CDC 1999
Illinois	Primary drinking water standard MCL	7 MFL	BNA 2001
Indiana	MCL	7 MFL	IDEM 2001a
Kansas	Surface water quality criteria Domestic water supply	7 MFL	BNA 2001
Kentucky	Surface water standards Domestic water supply use	7 MFL	BNA 2001
Maryland	Drinking water MCL (f>10 µm in length)	7 MFL	BNA 2001
Massachusetts	Water quality standard (f>10 µm in length)	7 MFL	FSTRAC 1999
Michigan	Drinking water standard MCL (f>10 µm in length) Effective date	7 MFL 07/30/92	BNA 2001

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Agency	Description	Information	References
<i>STATE (cont.)</i>			
Montana	Public water supply requirement MCL (f>10 µm in length)	7 MFL	BNA 2001
Nebraska	Drinking water standard MCL (f>10 µm in length)	7 MFL	BNA 2001
Nebraska	Water quality standard Water supply (f>10 µm in length)	7 MFL	BNA 2001
New Hampshire	Drinking water rule MCL (f>10 µm in length)	7 MFL	BNA 2001
	MCLG (f>10 µm in length)	7 MFL	
New Hampshire	Surface water quality regulation Water and fish ingestion	7 MFL	BNA 2001
New Mexico	Drinking water MCL (f>10 µm in length)	7 MFL	BNA 2001
New York	Drinking water supplies MCL (f>10 µm in length)	7 MFL	BNA 2001
North Dakota	Public water supply systems MCL (f>10 µm in length)	7 MFL	BNA 2001
Rhode Island	Groundwater quality standard Preventive action limit	7 MFL 3.5 MFL	BNA 2001
South Carolina	Drinking water MCL (f>10 µm in length)	7 MFL	BNA 2001
	Water quality criteria Organism consumption	7 MFL	BNA 2001
South Dakota	Surface water quality standard Human health value concentration	7 MFL	BNA 2001
Tennessee	Groundwater quality criteria	7 MFL	BNA 2001
	Public water systems MCL (f>10 µm in length)	7 MFL	BNA 2001
Utah	Primary drinking water standard MCL (f>10 µm in length)	7 MFL	BNA 2001
Vermont	Drinking water quality requirement MCL (f>10 µm in length)	7 MFL	BNA 2001
	MCLG (f>10 µm in length)	7 MFL	

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Agency	Description	Information	References
<i>STATE (cont.)</i>			
Vermont	Groundwater quality standard Enforcement standard Preventive action limit	7 MFL 3.5 MFL	BNA 2001
Washington	Public water supplies MCL (f>10 µm in length)	7 MFL	BNA 2001
Wisconsin	Groundwater quality standard Enforcement standard Preventive action limit	7 MFL 0.7 MFL	BNA 2001
c. Food		No data	
d. Other			
California	Chemical known to cause cancer or reproductive toxicity Effective date Hazardous substance Identification and listing of hazardous waste —characteristics of toxicity TTLC (wet-weight mg/kg)	02/27/87 1.0 (as a percent)	BNA 2001 BNA 2001 BNA 2001
Florida	Toxic substances in the workplace		BNA 2001
Indiana	Regulations for asbestos hazards to the atmosphere and disposal of asbestos-containing waste; licenses asbestos personnel		IDEM 2001b
Maine	Emissions standard	200 pounds	BNA 2001
Massachusetts	Oil and hazardous material Toxic substance		BNA 2001 BNA 2001
New Jersey	Hazardous substance		BNA 2001
New York	Occupation lung disease Hazardous substance—reportable quantity Air Land and water	1 pound 1 pound	BNA 2001 BNA 2001
Ohio	Toxic chemical list		Ohio EPA 2001
Oregon	Toxic substance		BNA 2001

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Agency	Description	Information	References
<i>STATE (cont.)</i>			
Pennsylvania	Hazardous substance		BNA 2001
South Carolina	Toxic pollutant		BNA 2001

^aIncludes: Actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite

^bGroup 1: Carcinogenic to humans

^cGroup A: Human carcinogen

^dA1: Confirmed human carcinogen

ACGIH = American Conference of Governmental Industrial Hygienists; ADEQ = Arizona Department of Environmental Quality; BNA = Bureau of National Affairs; CDC = Center for Disease Control; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPSC = Consumer Product Safety Commission; DHS = Department of Health Services; DHHS = Department of Health and Human Services; EPA = Environmental Protection Agency; FDA = Food and Drug Administration; FSTRAC = Federal–State Toxicology Risk Analysis Committee; HAP = Hazardous Air Pollutant; IARC = International Agency for Research on Cancer; IDEM = Indiana Department of Environmental Management; IRIS = Integrated Risk Information System; MCL = maximum contaminant level; MCLG = maximum contaminant level goal; MFL = million fibers per liter; NESHAP = National Emission Standards for Hazardous Air Pollutants; NIOSH = National Institute of Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = permissible exposure limit; REL = recommended exposure limit; TLV = threshold limit value; TTLC = total threshold limit concentration; TWA = time-weighted average; USC = United States Code