

WAC 173-303-090 Dangerous waste characteristics. (1) Purpose. The purpose of this section is to set forth characteristics which a solid waste might exhibit and which would cause that waste to be a dangerous waste.

(2) Representative samples. The department will consider a sample obtained using any of the applicable sampling methods described in WAC 173-303-110(2), sampling and testing methods, to be a representative sample.

(3) Equivalent test methods. The testing methods specified in this section are the only acceptable methods, unless the department approves an equivalent test method in accordance with WAC 173-303-910(2).

(4) Quantity exclusion limit. A solid waste is a dangerous waste if it exhibits one or more of the dangerous waste characteristics described in subsections (5), (6), (7), and (8) of this section. If a person's solid waste exhibits one or more of these characteristics, then he or she is a dangerous waste generator (and may not be considered a small quantity generator as provided in WAC 173-303-070(8)) if the quantity of their waste exceeds 220 lbs. (100 kg) per month or per batch.

(5) Characteristic of ignitability.

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(i) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60 degrees C (140 degrees F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D93-06, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D3278-96 (2004)e1 as incorporated by reference at WAC 173-303-110 (3) (h) (v) and (vi);

(ii) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;

(iii) It is an ignitable compressed gas.

(A) The term "compressed gas" applies to any material or mixture having in the container an absolute pressure exceeding 40 p.s.i. at 70 degrees F or, regardless of the pressure at 70 degrees F, having an absolute pressure exceeding 104 p.s.i. at 130 degrees F; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100 degrees F as determined by ASTM Test D-323.

(B) A compressed gas must be characterized as ignitable if any one of the following occurs:

(I) Either a mixture of 13 percent or less (by volume) with air forms a flammable mixture or the flammable range with air is wider than 12 percent regardless of the lower limit. These limits must be determined at atmospheric temperature and pressure. The method of sampling and test procedure must be acceptable to the Bureau of Explosives and approved by the director, Pipeline and Hazardous Materials Technology, U.S. Department of Transportation (see Note 2).

(II) Using the Bureau of Explosives' Flame Projection Apparatus (see Note 1), the flame projects more than 18 inches beyond the ignition source with valve opened fully, or the flame flashes back and burns at the valve with any degree of valve opening.

(III) Using the Bureau of Explosives' Open Drum Apparatus (see Note 1), there is any significant propagation of flame away from the ignition source.

(IV) Using the Bureau of Explosives' Closed Drum Apparatus (see Note 1), there is any explosion of the vapor-air mixture in the drum; or,

(iv) It is an oxidizer. An oxidizer for the purpose of this subsection is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter (see Note 4).

An organic compound containing the bivalent -O-O-structure and which may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals must be classed as an organic peroxide unless:

(A) It is a forbidden explosive as defined in 49 C.F.R. 173.54, or a Class 1 explosive, Division 1.1, Division 1.2, Division 1.3, and Division 1.5, as defined in 49 C.F.R. 173.50, in which case it must be classed as an explosive;

(B) The material is forbidden to be offered for transportation according to 49 C.F.R. 172.101 and 49 C.F.R. 173.21;

(C) It is determined that the predominant hazard of the material containing an organic peroxide is other than that of an organic peroxide; or

(D) According to data on file with the Pipeline and Hazardous Materials Safety Administration in the U.S. Department of Transportation (see Note 3), it has been determined that the material does not present a hazard in transportation.

Note 1: A description of the Bureau of Explosives' Flame Projection Apparatus, Open Drum Apparatus, Closed Drum Apparatus, and method of tests may be procured from the Bureau of Explosives.

Note 2: As part of a U.S. Department of Transportation (DOT) reorganization, the Office of Hazardous Materials Technology (OHMT), which was the office listed in the 1980 publication of 49 C.F.R. 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. OHMT programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.

Note 3: As part of a U.S. Department of Transportation (DOT) reorganization, the Research and Special Programs Administration (RSPA), which was the office listed in the 1980 publication of 49 C.F.R. 173.151a for the purposes of determining that a material does not present a hazard in transport, ceased operations on February 20, 2005. RSPA programs have moved to the Pipeline and Hazardous Materials Safety Administration (PHMSA) in the DOT.

Note 4: The DOT regulatory definition of an oxidizer was contained in Sec. 173.151 of 49 C.F.R., and the definition of an organic peroxide was contained in paragraph 173.151a. An organic peroxide is a type of oxidizer.

(b) A solid waste that exhibits the characteristic of ignitability must be designated DW, and assigned the dangerous waste number of D001.

(6) Characteristic of corrosivity.

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has any one or more of the following properties:

(i) It is aqueous and has a pH less than or equal to 2, or greater than or equal to 12.5, as determined by a pH meter using Method 9040C in *"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,"* EPA Publication SW-846, as incorporated by reference in WAC 173-303-110 (3) (a);

(ii) It is liquid and corrodes steel (SAE 1020) at a rate greater than 0.250 inch (6.35 mm) per year at a test temperature of 55 degrees C (130 degrees F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM0169-2000 as standardized in *"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,"* (Method 1110A) EPA Publication SW-846, as incorporated by reference in WAC 173-303-110 (3) (a); or

(iii) It is solid or semisolid which, upon testing using Method 9045D in *"Test Methods for Evaluating Solid Waste, Physical/Chemical*

Methods" (SW 846), results in a pH less than or equal to 2, or greater than or equal to 12.5.

(b) A solid waste that exhibits the characteristic of corrosivity because:

(i) It has either of the properties described in (a)(i) or (ii) of this subsection will be designated DW, and assigned the dangerous waste number of D002;

(ii) It only has the property described in (a)(iii) of this subsection will be designated DW, and assigned the dangerous waste number of WSC2.

(7) Characteristic of reactivity.

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

(i) It is normally unstable and readily undergoes violent change without detonating;

(ii) It reacts violently with water;

(iii) It forms potentially explosive mixtures with water;

(iv) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

(v) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

(vi) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

(vii) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or

(viii) It is a forbidden explosive as defined in 49 C.F.R. 173.54, or a Class 1 explosive, Division 1.1, Division 1.2, Division 1.3, and Division 1.5, as defined in 49 C.F.R. 173.50 and 173.53.

(b) A solid waste that exhibits the characteristic of reactivity must be designated DW, and assigned the dangerous waste number of D003.

(8) Toxicity characteristic.

(a) A solid waste exhibits the characteristic of toxicity if, using the *Toxicity Characteristic Leaching Procedure* (TCLP), test Method 1311 in "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*," EPA Publication SW-846, as incorporated by reference in WAC 173-303-110 (3)(a), the extract from a representative sample of the waste contains any of the contaminants listed in the toxicity characteristic list in (c) of this subsection, at concentrations equal to or greater than the respective value given in the list. When the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this subsection.

(b) A solid waste that exhibits the toxicity characteristic has the dangerous waste number specified in the list which corresponds to the toxic contaminant causing it to be dangerous.

(c) Toxicity characteristic list. Any waste that contains contaminants which occur at concentrations at or above the DW threshold must be designated DW.

TOXICITY CHARACTERISTICS LIST:

Maximum Concentration of Contaminants

for the Toxicity Characteristic

Dangerous Waste Number	Contaminant	(Chemical Abstracts Services #)	DW (mg/L)
D004	Arsenic	(7440-38-2)	5.0
D005	Barium	(7440-39-3)	100.0
D018	Benzene	(71-43-2)	0.5
D006	Cadmium	(7440-43-9)	1.0
D019	Carbon tetrachloride	(56-23-5)	0.5
D020	Chlordane	(57-74-9)	0.03
D021	Chlorobenzene	(108-90-7)	100.0
D022	Chloroform	(67-66-3)	6.0
D007	Chromium	(7440-47-3)	5.0
D023	o-Cresol	(95-48-7) /1/	200.0
D024	m-Cresol	(108-39-4) /1/	200.0
D025	p-Cresol	(106-44-5) /1/	200.0
D026	Cresol	/1/	200.0
D016	2,4-D	(94-75-7)	10.0
D027	1,4-Dichlorobenzene	(106-46-7)	7.5
D028	1,2-Dichloroethane	(107-06-2)	0.5
D029	1,1-Dichloroethylene	(75-35-4)	0.7
D030	2,4-Dinitrotoluene	(121-14-2) /2/	0.13
D012	Endrin	(72-20-8)	0.02
D031	Heptachlor (and its epoxide)	(76-44-8)	0.008
D032	Hexachlorobenzene	(118-74-1) /2/	0.13
D033	Hexachlorobutadiene	(87-68-3)	0.5
D034	Hexachloroethane	(67-72-1)	3.0
D008	Lead	(7439-92-1)	5.0
D013	Lindane	(58-89-9)	0.4
D009	Mercury	(7439-97-6)	0.2
D014	Methoxychlor	(72-43-5)	10.0
D035	Methyl ethyl ketone	(78-93-3)	200.0
D036	Nitrobenzene	(98-95-3)	2.0
D037	Pentachlorophenol	(87-86-5)	100.0
D038	Pyridine	(110-86-1) /2/	5.0
D010	Selenium	(7782-49-2)	1.0
D011	Silver	(7440-22-4)	5.0
D039	Tetrachloroethylene	(127-18-4)	0.7
D015	Toxaphene	(8001-35-2)	0.5
D040	Trichloroethylene	(79-01-6)	0.5
D041	2,4,5-Trichlorophenol	(95-95-4)	400.0
D042	2,4,6-Trichlorophenol	(88-06-2)	2.0
D017	2,4,5-TP (Silvex)	(93-72-1)	1.0
D043	Vinyl chloride	(75-01-4)	0.2

/1/ If 0-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used.

/2/ At the time the TC rule was adopted, the quantitation limit was greater than the calculated regulatory level. The quantitation limit therefore became the regulatory level.

[Statutory Authority: Chapter 70.105 RCW. WSR 15-01-123 (Order 13-07), § 173-303-090, filed 12/18/14, effective 1/18/15. Statutory Authority: Chapters 70.105 and 70.105D RCW. WSR 09-14-105 (Order 07-12), §

173-303-090, filed 6/30/09, effective 7/31/09. Statutory Authority: Chapters 70.105, 70.105D, and 15.54 RCW and RCW 70.105.007. WSR 04-24-065 (Order 03-10), § 173-303-090, filed 11/30/04, effective 1/1/05. Statutory Authority: Chapters 70.105 and 70.105D RCW. WSR 98-03-018 (Order 97-03), § 173-303-090, filed 1/12/98, effective 2/12/98; WSR 95-22-008 (Order 94-30), § 173-303-090, filed 10/19/95, effective 11/19/95; WSR 94-01-060 (Order 92-33), § 173-303-090, filed 12/8/93, effective 1/8/94. Statutory Authority: Chapters 70.105 and 70.105D RCW, 40 C.F.R. Part 271.3 and RCRA § 3006 (42 U.S.C. 3251). WSR 91-07-005 (Order 90-42), § 173-303-090, filed 3/7/91, effective 4/7/91. Statutory Authority: Chapter 70.105 RCW. WSR 87-14-029 (Order DE-87-4), § 173-303-090, filed 6/26/87; WSR 86-12-057 (Order DE-85-10), § 173-303-090, filed 6/3/86; WSR 84-14-031 (Order DE 84-22), § 173-303-090, filed 6/27/84. Statutory Authority: RCW 70.95.260 and chapter 70.105 RCW. WSR 82-05-023 (Order DE 81-33), § 173-303-090, filed 2/10/82.]