

Regulation on the characteristics and list of industrial hazardous waste

No. 27000-MINAE

THE PRESIDENT OF THE REPUBLIC AND

THE MINISTER OF ENVIRONMENT AND ENERGY

Based on articles 50 and 140, subsections 3) and 18) of the Political Constitution and in accordance with the provisions of articles 60 and 69 of the Organic Law of the Environment, No. 7554.

CONSIDERING:

1º- That the generation of hazardous waste has been increasing in recent years, as a result of the growth of industrial and agro-industrial processes.

2º- That there is no adequate definition and identification of this type of waste and its generators

3º- That the protection of the environment is one of the fundamental pillars of the sustainable development model that the country has undertaken, and that the Ministry of Environment and Energy has been promoting processes to make its work in this field more efficient.

4º- That the mismanagement of hazardous waste has a negative impact on human health and natural ecosystems.

5º- That it is the obligation of the State to ensure the health and quality of life of humans, as well as the conservation of biodiversity.

6º- That it is necessary to unify the nomenclature and classification of wastes that, due to physical or chemical qualities, cause damage to human health or natural ecosystems.

7º- That to comply with the stated objectives it is necessary to regulate the definition, classification and codification of hazardous waste.

8º- That given the above circumstances, this regulation is published by the urgent procedure and is open to consultation so that observations and comments that are considered pertinent can be made within a period of two months. **Therefore:**

DECREE:

REGULATION ON THE CHARACTERISTICS AND LIST OF DANGEROUS INDUSTRIAL WASTE

General disposition:

Waste, reform Regulation on the characteristics and list of hazardous waste and Regulations for the Management of Industrial Hazardous Waste")

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Article 2 - (Repealed by article 2 part 1) of executive decree No. 37788 of February 15, 2013, "Approves the General Regulation for the Classification and Management of Hazardous Waste, reform Regulation on the characteristics and list of hazardous waste and Regulations for the Management of Industrial Hazardous Waste")

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Article 3 - Of the characteristics that allow an industrial waste to be classified as dangerous.

3.1- A waste is considered explosive if it has any of the following properties:

- It has an explosive constant equal to or greater than that of dinitrobenzene .
- It is capable of producing a detonating or explosive reaction or decomposition at 25 °C and at 1.03 Kg /cm² of pressure.

3.2- A waste is considered flammable if it has any of the following properties:

- It is an aqueous solution with more than 24% alcohol by volume.
- It is a liquid with a flash point lower than 60.5 °C and with an ignition point lower than 16 °C .
- It is not liquid but it is capable of producing fire due to friction, moisture absorption or spontaneous chemical changes at 25 °C and 1.03 Kg /cm².

It is made up of flammable compressed gases or oxidizing agents that stimulate combustion.

3.3- A waste is considered reactive if it presents any of the following properties:

- Under normal conditions (temperatures of 25 °C and pressure of 1 atm). It polymerizes violently without detonation.

- Under normal conditions, when it comes into contact with water with a waste-water ratio of 5:1.5:3.5:5, it reacts violently, forming gases, vapors or fumes.
- Under normal conditions, when coming into contact with acidic (HCl 1 N) and basic (NaOH 1 N) pH solutions , in a ratio (residue - solution) of 5:1, 5:3, 5:5, it reacts violently, forming gases , toxic vapors or fumes.
- It has in its constitution cyanides or sulfides that when exposed in pH conditions between 2 to 12.5 can generate toxic gases, vapors or fumes in quantities greater than 250 mg HCN/ Kg residue or 500 mg H₂S/ kg residue.

It is capable of detonating or reacting explosively if exposed to a strong initiating agent or if heated under confinement conditions.

It is capable of producing free radicals.

3.4- A waste is considered toxic to the environment, if, when subjected to an extraction test for toxicity, the leachate from the representative sample contains any of the constituents listed in tables 2, 3 and 4 of Annex 1, in concentrations greater than those indicated. . The extraction test for leachate toxicity is presented in regulation No. 3 "Procedures to carry out the extraction test to determine constituents that make waste hazardous due to its toxicity to the environment."

3.5- A waste is considered biologically infectious if it presents any of the following properties:

It contains bacteria, viruses or other microorganisms capable of producing inflammation or infection. Contains toxins produced by microorganisms that cause harmful effects in living beings.

3.6- A waste is considered corrosive if it presents any of the following properties:

In liquid state or aqueous solution it has a pH less than or equal to 2, or greater than or equal to 12.5.

* In liquid state or aqueous solution and at a temperature of 55 °C it is capable of corroding carbon steel (SAE 1020) at a rate of 6.35 mm or more per year.

3.7- When there is a mixture between one or more "ordinary" residues or wastes with hazardous residues or wastes, this mixture will be taken as a hazardous waste.

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Article 4 - Of the characteristics of hazardous waste.

4.1- A waste is considered to be dangerous when it presents one or more of the following characteristics: explosive, flammable, reactive, toxic, biological, infectious, corrosive. These characteristics are defined in Table No. 1 of Annex 1, according to the Basel Convention.

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Article 5 - (Repealed by article 2 part 1) of executive decree No. 37788 of February 15, 2013, "Approves the General Regulation for the Classification and Management of Hazardous Waste, reform Regulation on the characteristics and list of hazardous waste and Regulations for the Management of Industrial Hazardous Waste")

Article 5 - *(Repealed by Article 2 part 1) of executive decree No. 37788 of February 15, 2013, "Approves General Regulations for the Classification and Management of Hazardous Waste, reform Regulation on the characteristics and list of hazardous waste and Regulations for the Management of Industrial Hazardous Waste")*

(Note from Sinalevi : In the publication of this executive decree, article 5 was obtained twice)

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Article 6 - Applies from its signature.

San José, April twenty-ninth, nineteen ninety-eight.

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APPENDIX 1

TABLE N° 1: LIST OF DANGEROUS CHARACTERISTICS OF A WASTE

Characteristics

EXPLOSIVES

Explosives:

By substance or waste is meant any substance or solid or liquid waste (or mixture of substances or waste) that by itself is capable, through chemical reaction, of emitting a gas at a temperature, pressure and speed that can cause damage to the area. surrounding.

FLAMMABLE

Flammable liquids:

Flammable liquids are understood to be those liquids, or mixtures of liquids, or liquids with solids in solution or suspension, for example, paints, varnishes, lacquers, etc., but not including substances or wastes classified in another way due to their dangerous characteristics, that emit flammable vapors at temperatures not higher than 60.5 °C , in tests with open bucket.

Flammable Solids:

These are solids or solid wastes, other than those classified as explosives, which under the conditions prevailing during transport are readily combustible or may cause or contribute to a fire due to friction.

Substances or wastes capable of spontaneous combustion:

These are substances or wastes that are susceptible to spontaneous heating under normal conditions of transport or heating in contact with air, and that can then ignite.

Substances or wastes that in contact with water emit flammable gases.

Substances or wastes which, by reaction with water, are susceptible to spontaneous ignition or the emission of flammable gases in dangerous quantities.

REAGENT

Oxidants:

Substances or wastes that, without necessarily being combustible, can in general, by giving up oxygen, cause or favor the combustion of other materials.

Organic peroxides:

Organic substances or debris containing the bivalent structure -O-O- are thermally unstable substances that can undergo exothermic decomposition.

Release of toxic gases on contact with air or water:

Substances or wastes which, by reaction with air or water, can emit toxic gases in dangerous quantities.

TOXIC

Acute toxic (poisons)

Substances or wastes that can cause death or serious injury or damage to human health, if swallowed or inhaled or come into contact with the skin.

Toxic substances (with delayed or chronic effects)

Substances or debris that, if inhaled or ingested, or penetrate the skin, may cause delayed or chronic effects, including carcinogens.

Toxic to the environment:

Substances or wastes which, if released, have or may have immediate or delayed adverse effects in the environment, due to bioaccumulation or toxic effects on biotic systems.

Characteristics

BIOLOGICAL INFECTIOUS

Infectious substances:

Substances or wastes containing viable microorganisms or their toxins, known or suspected agents of disease in animals or humans.

CORROSIVE

Corrosive:

Substances or waste that By chemical action, they cause serious damage to living tissues that they touch or which, in case of leakage, can seriously damage, or even destroy, other merchandise or the means of transport or can also cause other dangers.

OTHERS

Substances that can, by some means, after disposal, give rise to other substances, for example, a leach product, which possesses any of the above characteristics.

TABLE N°2 : INORGANIC CONSTITUENTS PRESENT IN THE LEACHATE EXTRACTED FROM A WASTE THAT MAKE IT DANGEROUS DUE TO ITS TOXICITY.

Inorganic constituent	Maximum allowed concentration (mg /l)
Arsenic 5.0	
barium	100.0
cadmium 1.0	
Hexavalent Chromium 5.0	
Nickel 5.0	

Mercury 0.2

Silver 5.0

lead 5.0

Selenium 1.0

TABLE Nº3 : ORGANIC CONSTITUENTS PRESENT IN THE LEACHATE EXTRACTED FROM A WASTE THAT MAKE IT DANGEROUS DUE TO ITS TOXICITY

Inorganic constituent
concentration (mg /l)

Maximum allowed

Acrylonitrile

5.0

Chlordane 0.03

o-Cresol 200.0

m-Cresol 200.0

p-Cresol 200.0

2,4 Dichlorophenoxyacetic acid 10.0

2.4 Dinitrotoluene

0.13

Endrin 0.02

Heptachlor (and its epoxide) 0.008

**Hexachloroethane
3.0**

Lindane

0.4

Methoxychlor 10.0

Nitrobenzene

2.0

Pentachlorophenol 100.0

2 ,3,4,6 tetrachlorophenol

1.5

Toxaphene (technical camphenochloride

) 0.5

2,4,5 trichlorophenol 400.0 _

2,4,6 trichlorophenol 2.0

—

2,4,5 trichlorophenoxypropionic acid (silvex) 1.0 _

TABLE N°4 : VOLATILE ORGANIC CONSTITUENTS PRESENT IN THE LEACHATE EXTRACTED FROM A WASTE THAT MAKE IT DANGEROUS DUE TO ITS TOXICITY

Volatile organic constituents	Maximum allowed concentration (mg /l)
benzene	0.5
Ether bis (2 chloro ethyl)	0.05
Chlorobenzene 100	
Chloroform	6.0
Methyl chloride	8.6
1,2 dichlorobenzene	0.2
1,4 dichlorobenzene	4.3
1,2 dichloroethane 7.5	
1,4 dichloroethane	0.5
1,1 dichloroethylene	0.7
carbon disulfide 14.4	

phenol 14.4

Hexachlorobenzene 0.13

Hexachloro -1,3 butadiene 0.5

Isobutanol 36.0

Ethylmethylketone 200.0

Pyridine 5.0

1,1,1,2 tetrachloroethane 10.0 _

1,1,2,2 tetrachloroethane 1.3 _

carbon tetrachloride 0.5

Tetrachlorethylene 0.7

Toluene 14.4

1,1,1 trichloroethane 30.0 _

1,1,2 trichloroethane 1.2 _

Trichlorethylene

0.5

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APPENDIX 2

TABLE N°5: *(Repealed the previous table 5 called: " WASTE GENERATED BY SPECIFIC SOURCES" , by article 2 apart1) of executive decree N° 37788 of February 15, 2013, "Approves General Regulations for the Classification and Management of Waste Hazardous, reform Regulation on the characteristics and list of industrial hazardous waste and Regulation for the Management of Industrial Hazardous Waste")*

TABLE N°6: *(Repealed the previous table 6 called: " WASTE GENERATED BY NON-SPECIFIC SOURCES" , by article 2° apart1) of executive decree N° 37788 of February 15, 2013, "Approves General Regulations for the Classification and Management of Hazardous Waste, reform Regulation on the characteristics and list of industrial hazardous waste and Regulation for the Management of Industrial Hazardous Waste")*

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