

## Characteristics to be considered in determining whether a substance should be considered as a hazardous waste

In the management of hazardous waste it is necessary to be rigorous to make a good classification of toxic and/or hazardous substances, following the procedure P.MA.4.4.6/002. However, it is as important to make a good identification, classification, labelling and storage as to prevent waste with a very low concentration of pollutants from receiving a treatment that does not belong to them, as this also has environmental and economic costs.

Therefore, it is necessary to check whether the waste generated exceeds the concentration limit values or physic-chemical parameters to be considered hazardous waste. We advise you, first of all, to check if your residue exceeds the thresholds referred to in the sections on physic-chemical parameters and limit values for pollutants. If you do not find the waste you generate in the list, consult the concentration list by hazard category.

**If the values of your liquid waste are below these thresholds, the current regulations do not consider it as special waste and discharge into the wastewater system is permitted. Under no circumstances is dilution of the residue allowed in order to reduce its concentration below the limit value.**

### Physic-chemical parameters

Parameter	Limit value	Units	
T	40	°C	
pH (interval)	6-10	pH	
SM (suspended matter)	750	mg/l	
COD (not decanted)	1.500	mg/l	O <sub>2</sub>
TOC (total organic carbon)	450	mg/l	C
Oils and fats	250	mg/l	
Chlorides	2.500	mg/l	Cl <sup>-</sup>
Conductivity (at 25 °C)	6.000	µS/cm	
Sulphur dioxide	15	mg/l	SO <sub>2</sub>
Sulphates	1.000	mg/l	SO <sub>4</sub> <sup>2-</sup>
Total sulphides	1	mg/l	S <sup>2-</sup>
Total phosphorus	50	mg/l	P
Nitrates	100	mg/l	NO <sub>3</sub> <sup>-</sup>
Ammonium	60	mg/l	NH <sub>4</sub> <sup>+</sup>
Organic and ammoniacal nitrogen <sup>1</sup>	90	mg/l	N

Metropolitan regulation of waste water discharge (BOP 11/04/2019). Annex 2, discharge limits (Block 1).

<sup>1</sup> Ammoniacal + organic nitrogen determined according to the Kjeldahl method.

### Limit values of pollutants

Parameter	Limit value	Units	
Fluorides **	12	mg/l	F
Total cyanides **	1	mg/l	CN <sup>-</sup>
Phenol index	2	mg/l	C <sub>6</sub> H <sub>5</sub> OH
Anionic surfactants	6	mg/l	LSS <sup>2</sup>
Total surfactants	60	mg/l	<sup>3</sup>
Aluminium	20	mg/l	Al
Antimony	1	mg/l	Sb
Arsenic *	1	mg/l	As
Barium	10	mg/l	Ba
Boron	3	mg/l	B
Cadmium *	0,5	mg/l	Cd
Copper **	1	mg/l	Cu
Hexavalent chromium **	0,5	mg/l	Cr(VI)
Total chromium **	1	mg/l	Cr
Tin	5	mg/l	Sn
Iron	10	mg/l	Fe
Manganese	2	mg/l	Mn
Mercury *	0,1	mg/l	Hg
Molybdenum	1	mg/l	Mo
Nickel *	2	mg/l	Ni
Lead *	1	mg/l	Pb
Selenium **	0,5	mg/l	Se
Zinc	5	mg/l	Zn
IM (Inhibitory materials)	25	Equitox	MI
Hydrocarbons	15	mg/l	HCs
BTEX (benzene, toluene, ethylbenzene and xylenes) ***	5	mg/l	
AOX (adsorbable organic halogens)	2	mg/l	Cl
Chloroform *	1	mg/l	Cl <sub>3</sub> CH
1,2- dichloroethane *	0,4	mg/l	Cl <sub>2</sub> C <sub>2</sub> H <sub>4</sub>
Trichlorethylene *	0,4	mg/l	Cl <sub>3</sub> C <sub>2</sub> H
Tetrachloroethylene *	0,4	mg/l	Cl <sub>4</sub> C <sub>2</sub>
Trichlorobenzene *	0,2	mg/l	Cl <sub>3</sub> C <sub>6</sub> H <sub>3</sub>
Carbon tetrachloride *	1	mg/l	Cl <sub>4</sub> C
HAP (aromatic hydrocarbons) ***	0,20	mg/l	Sum of those contemplated in RD 60/2011 and others of the group likely to be in the dump.
Total pesticides ***	0,10	mg/l	
Total triazines ***	0,30	mg/l	
Nonylphenols *	0,50	mg/l	
Tributyltin	0,10	mg/l	

\* Priority      \*\* Preferential      \*\*\* Sum of priority/preferential

Metropolitan regulation of waste water discharge (BOP 11/04/2019). Annex 2, discharge limits (Block 1).

<sup>2</sup> Active substances in methylene blue (MBAS) expressed as sodium lauryl sulphate (SLS).

<sup>3</sup> Sum of all surfactants: anionic, non-ionic, cationic and amphoteric expressed as SLS, polyethoxylated octyl phenol TX-100, CTAB and amido-betaine respectively.

For substances not specified in the Metropolitan Waste Disposal Regulation, the concentrations set out in Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures may not be exceeded.

### Concentration by toxicological hazard category

Hazard category	% by weight
Acute toxicity - categories 1 to 3	≥0,1
Acute toxicity - category 4	≥1
Skin corrosion or irritation	≥1
Serious eye damage or eye irritation	≥1
Respiratory or skin sensitization	≥1
Mutagen - category 1A and 1B	≥0,1
Mutagen - category 2	≥1
Carcinogen - category 1A and 1B	≥0,1
Carcinogen - category 2	≥1
Toxic for reproduction - category 1A and 1B	≥0,3
Toxic for reproduction - category 2	≥3
Specific target organ toxicant STOT single exposure - category 1	≥0,1
Specific target organ toxicant STOT single exposure - category 2	≥1
Specific target organ toxicant STOT single exposure - category 3	≥10
Specific target organ toxicant STOT repeated exposure - category 1	≥0,1
Specific target organ toxicant STOT repeated exposure - category 2	≥1
Dangerous for the aquatic environment - acute category 1	≥0,1
Hazardous to the aquatic environment - chronic category 1	≥0,1
Dangerous for the aquatic environment - chronic categories 2 to 4	≥1
Dangerous for the ozone layer	≥0,1

*From Regulation (EC) no. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures.*

Although the classification of substances and mixtures as specific target organ toxicants (single and repeated exposure STOTs) is established from human exposure data or from studies with experimental animals, the concentration limits applied are based, with the principle of utmost caution, on the values in Tables 3.8.3 and 3.9.4 of Regulation (EC) no. 1272/2008.