

The Easy HANDBOOK

of European SDSs

SECTION 13:

disposal considerations



What information do I need to provide in section 13 of the SDS?



13.1 Waste treatment methods

Section 13 should provide information on:

- **Proper waste management of the substance or mixture**
- **Appropriate treatment methods**

This section of the SDS provides information for proper waste management of the substance or mixture and/or its container, **to assist in the determination of safe and environmentally preferred waste management options**, consistent with the requirements of Directive 2008/98/EC of the European Parliament and of the Council by the Member State in which the SDS is being supplied.

Information relevant to the safety of waste management workers shall complement that provided in Section 8.

Where a chemical safety report is required and a waste stage analysis has been performed, information on waste management measures shall be consistent with the uses identified in the chemical safety report and the relative exposure scenarios set out in the Annex to the SDS.

Keep in mind that when the substance becomes waste, the REACH Regulation no longer applies, but the regulatory framework within which to operate is that of waste legislation.

13.1

subsection

FIRST STEP

Waste treatment methods

This subsection of the SDS must:

- 13.1.1** specify **containers and methods for waste treatment**, including appropriate methods of waste treatment of the substance or mixture and any contaminated packaging (e.g., incineration, recycling, landfilling);
- 13.1.2** specify the **physical/chemical properties** that may affect waste treatment options;
- 13.1.3** **discourage sewage disposal**;
- 13.1.4** identify, where appropriate, **special precautions** for any recommended waste treatment option.

Focus on ... waste



Waste is defined as "**any substance or object which the holder discards or intends or is required to discard (art. 3 of Directive 2008/98/EC and subsequent amendments)**".

Anything that does not fall into this definition cannot be considered waste, let alone dangerous waste (for example: emissions consisting of gaseous effluents emitted into the atmosphere, explosive materials in disuse ...).

Directive 2008/98/EC establishes a legal framework for waste treatment in the EU, designed to protect the environment and human health, stressing the importance of appropriate waste management, reuse and recycling techniques aimed at reducing pressure on resources and improving their use.

When is waste defined as dangerous?






Waste containing hazardous substances over certain concentrations is considered hazardous according to Directive 2008/98/EC. Waste can be hazardous because of its origin (for example, medical waste at risk of infection) or due to the presence of hazardous substances.

The presence of these substances gives the waste HP hazard properties.

The attribution of the HP hazard code is a fundamental part of waste characterization because it determines regulatory requirements relating to both road transport of dangerous goods and safety at work.

Hazard properties		Waste substances classified in the following hazard classes defined by CLP	Criteria for the assignment of hazard properties
HP1	Explosive	H200, H201, H202, H203, H204, H240, H241	The waste is classified as hazardous type HP1 if the presence of a substance, a mixture or an article indicates that the waste is explosive (evaluate with specific method Reg. 440/08)
HP2	Oxidising	H270, H271, H272	The waste is classified as hazardous type HP2 if the presence of a substance indicates that the waste is oxidising (evaluate with specific method Reg. 440/08)
HP3	Flammable	H220, H221, H222, H223, H224, H225, H226, H228	<p>The waste is classified as hazardous type HP3 if:</p> <ul style="list-style-type: none"> • flammable liquid waste: liquid waste with a flash point below 60 °C or waste gas oil, diesel and light heating oils with a flash point > 55 °C and ≤ 75 °C; • flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, can ignite within five minutes after coming into contact with air; • flammable solid waste: solid waste that is readily combustible or may contribute to fire through friction • flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and standard pressure of 101,3 kPa; • water-reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities; • other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

Hazard properties		Waste substances classified in the following hazard classes defined by CLP	Criteria for the assignment of hazard properties
HP4	Irritant – Skin irritation and eye damage	H314	The waste is classified as hazardous type HP4 if the sum of the concentrations of substances classified as H314 is $\geq 1\%$ and $< 5\%$
		H318	The waste is classified as hazardous type HP4 if the sum of the concentrations of substances classified as H318 is $\geq 10\%$
		H315, H319	The waste is classified as hazardous as HP4 if the sum of the concentrations of substances classified as H315 and H319 is $\geq 20\%$
HP5	Specific target organ toxicity (STOT)/aspiration toxicity	H370	The waste is classified as hazardous type HP5 if the concentration of one of the substances classified as H370 is $\geq 1\%$
		H371	The waste is classified as hazardous type HP5 if the concentration of one of the substances classified as H371 is $\geq 10\%$
		H335	The waste is classified as hazardous type HP5 if the concentration of one of the substances classified as H335 is $\geq 20\%$
		H372	The waste is classified as hazardous type HP5 if the concentration of one of the substances classified as H372 is $\geq 1\%$
		H373	The waste is classified as hazardous type HP5 if the concentration of one of the substances classified as H373 is $\geq 10\%$
		H304	The waste is classified as hazardous type HP5 if the sum of the concentrations of substances classified as H304 is $\geq 10\%$ and if the total kinematic viscosity (at $40\text{ }^{\circ}\text{C}$) does not exceed $20,5\text{ mm}^2/\text{s}$.

Hazard properties		Waste substances classified in the following hazard classes defined by CLP	Criteria for the assignment of hazard properties
HP6		H300 Acute Tox 1 (oral)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H300 Acute Tox 1 (oral) is ≥ 0.1 %
		H300 Acute Tox 2 (oral)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H300 Acute Tox 2 (oral) is $\geq 0,25$ %
		H301 Acute Tox 3 (oral)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H301 Acute Tox 3 (oral) is ≥ 5 %
		H302 Acute Tox 4 (oral)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H302 Acute Tox 4 (oral) is ≥ 25 %
		H310 Acute Tox 1 (dermal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H310 Acute Tox 1 (dermal) is ≥ 0.25 %
		H310 Acute Tox 2 (dermal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H310 Acute Tox 2 (dermal) is $\geq 2,5$ %
		H311 Acute Tox 3 (dermal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H311 Acute Tox 3 (dermal) is ≥ 15 %
		H312 Acute Tox 4 (dermal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H312 Acute Tox 4 (dermal) is ≥ 55 %
		H330 Acute Tox 1 (Inhal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H330 Acute Tox 1 (inhal) is $\geq 0,1$ %
		H330 Acute Tox 2 (Inhal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H330 Acute Tox 2 (inhal) is $\geq 0,5$ %
		H331 Acute Tox 3 (Inhal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H331 Acute Tox 3 (inhal) is $\geq 3,5$ %
		H332 Acute Tox 4 (Inhal)	The waste is classified as hazardous type HP6 if the sum of the concentrations of substances classified as H332 Acute Tox 4 (inhal) is $\geq 22,5$ %
Acute toxicity			

Hazard properties		Waste substances classified in the following hazard classes defined by CLP	Criteria for the assignment of hazard properties
HP7	Carcinogenic	H350	The waste is classified as hazardous type HP7 if the concentration of one of the substances classified as H350 is $\geq 0.1\%$
		H351	The waste is classified as hazardous type HP7 if the concentration of one of the substances classified as H351 is $\geq 1\%$
HP8	Corrosive	H314	The waste is classified as hazardous type HP8 if the sum of the concentrations of the substances classified as H314 is $\geq 5\%$
HP9	Infectious	The attribution of the hazard characteristic HP9 shall be assessed in accordance with the rules laid down in the reference documents or in the legislation of the Member States.	
HP10	Toxic for reproduction	H360	The waste is classified as hazardous type HP10 if the concentration of one of the substances classified as H360 is $\geq 0,3\%$
		H361	The waste is classified as hazardous type HP10 if the concentration of one of the substances classified as H361 is $\geq 3\%$
HP11	Mutagenic	H340	The waste is classified as hazardous type HP11 if the concentration of one of the substances classified as H340 is $\geq 0,1\%$
		H341	The waste is classified as hazardous type HP11 if the concentration of one of the substances classified as H341 is $\geq 1\%$
HP12	Release of an acute toxic gas	EUH029, EUH031, EUH032	Waste is classified as hazardous type HP12 according to test methods or guidelines
HP13	Sensitising	H317, H334	The waste is classified as hazardous as HP13 if the concentration of one of the substances classified as H317 or H334 is $\geq 10\%$
HP14	Ecotoxic	The attribution of the hazard characteristic HP14 is carried out according to the criteria of Regulation 2017/997, which differ from those of CLP, as they use the same formulas and thresholds, but they do not consider the M factors of the contained substances.	

Hazard properties		Waste substances classified in the following hazard classes defined by CLP	Criteria for the assignment of hazard properties
HP15	Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste	H205, EUH001, EUH019, EUH044	The waste is classified as hazardous type HP15 if it contains one or more substances with hazard class H205 or with supplemental hazard statement EUH001, EUH019, or EUH044

All waste is catalogued by attributing an identification code set out in the European Waste Catalogue (E.W.C.) and is shared throughout the European Union. EWC codes consist of six digits, e.g., XX.YY.ZZ. and the ones of hazardous waste are identified by an asterisk *.

XX → Activity generating waste

YY → Process generating waste

ZZ → Single waste

Example: 15.01.02

15 waste packaging; absorbents, wiping cloths, filter materials and protective clothing (not otherwise specified)

01 packaging (including separately collected municipal packaging waste)

02 plastic packaging

The attribution of the EWC code to the waste is the responsibility of its producer. Since the activity generating the waste may be unknown to the supplier of the product that becomes waste (in whole or in part), the EWC cannot always be indicated on the SDS of the product.

What if a waste consists of a mixture of many substances?



You need:

- Technical and scientific experience;
- Knowledge of the production cycle that generated the waste and of the contained substances;
- Consultation of the SDS of the substances contained in the waste;
- An accurate analytical investigation;
- Consultation of legislation regulating dangerous substances and preparations.

Disposal considerations



- If the treatment of the substance or mixture during disposal (surplus or residues resulting from foreseeable use) presents a hazard, a description of such hazards and information on how to ensure safe handling must be provided;
- The appropriate treatment methods shall be provided for waste substances or mixtures and for any contaminated packaging (including "empty" but not clean packaging containing residues of the substance or mixture), considering the waste hierarchy established by Directive 2008/98/EC;
- If other recommendations apply to the disposal of the substance or mixture used for its intended purpose, they may be mentioned separately.