

# The Classification of Hazardous Waste (HAZGUIDE NI 03)

A Guide to the Hazardous Waste Regulations and the  
List of Wastes Regulations in Northern Ireland

April 2011



## Guidance – HAZGUIDE NI 03: The Classification of Hazardous Waste

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### A Guide to the Hazardous Waste Regulations and the List of Wastes Regulations in Northern Ireland

#### Aims

You will need to read this document if you think you may be producing hazardous waste, or you either carry or collect waste. It uses a “desk-based” flowchart, with questions and answers, to help people work out if their waste is hazardous or non-hazardous. This document applies to Northern Ireland only.

Detailed technical guidance on assessing and classifying hazardous waste can be found in a document called WM2 [1] “*Hazardous waste: Interpretation of the definition and classification of hazardous waste*”. WM2 provides comprehensive information to decide if a waste is hazardous. If you are dealing with a complex hazardous waste you will find WM2 useful. This guide is not intended as a replacement for WM2 but aims to provide some simple principles behind hazardous waste assessment.

#### What has changed in this version of the guide?

We have made changes to HAZGUIDE NI 03 because:

- In April 2011, the Hazardous Waste Regulations were amended to implement the revised Waste Framework Directive;
- Chemicals legislation has changed how we assess waste as hazardous.

The changes include:

- The introduction of a new hazardous property H13 sensitizing;
- Moving what was H13 to H15;
- The replacement of the Approved Supply List with Annex VI Table 3.2 to the Classification, Labelling and Packaging of Substances Regulation. Table 3.2 is the new place to get risk phrases for common chemicals.

We have therefore changed Figure 1 Step 5, the text to Steps 4a and 5, and Appendix A

We have made a few other changes to the guide to make it simpler to follow, such as:

- Removing Step 2 and 3 from the old Figure 1 and the old text and moving it into Appendix B. Appendix B refers to changing the “absolute” status of a hazardous waste to non-hazardous and vice versa;
- Changing what was Step 4, but is now Step 2, so that it is clear what that “mirror” entry means can be hazardous or non-hazardous;
- Amending Step 4b (previously Step 6b) so that a waste is considered hazardous unless it is proved non-hazardous, if the producer does not know what is in the waste.

[1] WM2 (Version 2.3 – April 2011) can be found at:

[http://www.doeni.gov.uk/niea/wm2\\_interpretation\\_of\\_the\\_definition\\_classification\\_of\\_hazardous\\_waste.pdf](http://www.doeni.gov.uk/niea/wm2_interpretation_of_the_definition_classification_of_hazardous_waste.pdf)

## What regulations make a waste hazardous?

The regulations relevant to assessing hazardous waste are:

- The Hazardous Waste Regulations (Northern Ireland) 2005 as amended  
[http://www.legislation.gov.uk/nisr/2005/300/pdfs/nisr\\_20050300\\_en.pdf](http://www.legislation.gov.uk/nisr/2005/300/pdfs/nisr_20050300_en.pdf)
- The List of Wastes Regulations (Northern Ireland) 2005 as amended  
[http://www.legislation.gov.uk/nisr/2005/301/pdfs/nisr\\_20050301\\_en.pdf](http://www.legislation.gov.uk/nisr/2005/301/pdfs/nisr_20050301_en.pdf)

As part of the assessment of waste, the HWR refers you to the “List of Wastes” given in the LoWR. This list is also known as the European Waste Catalogue. It will be called the EWC in this document.

## Is my waste hazardous?

The flowchart in Figure 1 overleaf shows the steps involved in finding out if waste is hazardous or non-hazardous.

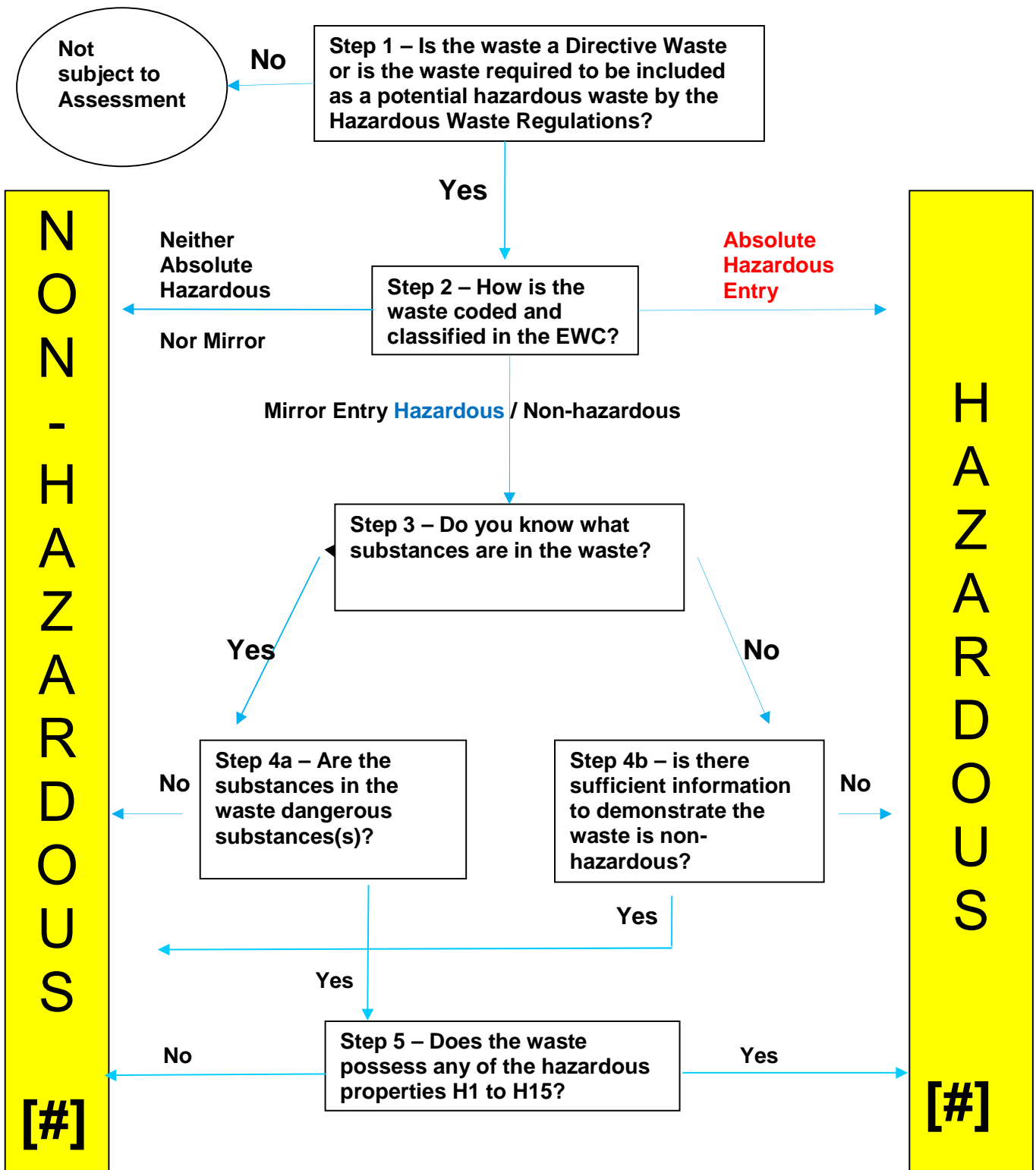


Figure 1: Hazardous Waste Assessment Methodology

[#] If you think that a hazardous waste has no hazardous properties or that a non-hazardous waste does have hazardous properties see Appendix B.

You should use Figure 1 by following the text below.

## **Step 1: Is the waste a Directive Waste or is the waste required to be included as a potential hazardous waste by the Hazardous Waste Regulations?**

Nearly all household, commercial and industrial wastes are Directive Waste and require assessment to determine if they are hazardous waste.

The phrase "Directive Waste" refers to European legislation called the revised Waste Framework Directive [2]. This identifies the environmental protection principles behind waste management. It also identifies which wastes are covered by these principles and those which were not.

Some wastes are completely excluded from being Directive Wastes and all waste controls; some are excluded if covered by other European legislation. Examples of exclusions include decommissioned explosives, waste waters and animal by-products. Further information on exclusions can be found in WM2.

Most radioactive waste is not Directive Waste. However, if radioactive waste is exempt from requiring an environmental permit by virtue of Section 15 of the Radioactive Substances Act 1993, and has one or more of the hazardous properties listed in Appendix A, this waste can be classified as hazardous waste according to Regulation 15 of the HWR.

## **Step 2: How is the waste coded and classified on the EWC?**

### **Coding**

In the EWC, individual wastes are given a six-digit code and a waste description.

The EWC consists of 20 chapters that refer either to a process that produced the waste or specific wastes types. The chapters are given two-digit number, for example:

*03 Wastes from wood processing and the production of panels, furniture, pulp, paper and cardboard*

Each of these chapters has sub-chapters shown by four-digits. The sub-chapters contain the unique six digit codes for each waste.

### **Applying a six-digit code**

The following steps must be used to identify the correct 6-digit code for a waste:

1. Find out whether the waste was produced from the source described in chapters 01 to 12 or 17 to 20. If so, work out the appropriate six-digit code of the waste. At this point, codes ending in '99' cannot be chosen.
2. If there is no appropriate waste code in 01 to 12 or 17 to 20, you must now look at chapters 13, 14 and 15 to identify the waste.
3. If none of these codes apply, use chapter 16 to identify the waste.
4. If the waste is not in chapter 16 either, the 99 code (wastes not otherwise specified) must be used in the section of the list that matches the activity identified above in 1.

Different wastes produced by one organisation may be described in several of the chapters.

[2] <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:EN:PDF>

## **Classification**

Some of the 6-digit codes in the EWC have an asterisk next to them. These are the hazardous wastes. Wastes without an asterisk are not hazardous waste. The EWC is reproduced in Appendix A of our technical guidance WM2.

Hazardous entries are known as:

- “**Absolute**” hazardous wastes; and
- “**Mirror**” hazardous wastes;

### **“Absolute” hazardous**

These wastes are marked in the EWC with an asterisk (\*), but the waste description next to the six-digit code does not have a specific or general reference to “*dangerous substance*” in the waste description. They are automatically considered hazardous. However, you must identify what hazardous properties the waste has for moving and handling the waste.

We call these “*absolute entries*”, they are colour-code red and marked with an “A” in WM2 Appendix A. For example:

13 07 01\* fuel oil and diesel A

### **“Mirror” hazardous and non hazardous**

Some waste can be either hazardous or not, depending on whether it contains “*dangerous substances*” at or above certain levels. This waste is covered by linked (usually, but not always two paired) six-digit entries in the EWC called “*mirror*” entries.

These wastes have:

- a hazardous waste entry (or entries) marked with an asterisk (\*), and
- an alternative paired non-hazardous waste entry (or entries) not marked with an asterisk.

“*Mirror*” entry hazardous wastes colour-coded blue and marked with an “M” in WM2 Appendix A, are identified because they refer to dangerous substances. They can do this in one of two ways:

1. a “general” reference to a dangerous substance(s), for example:

07 03 11\* sludges from on-site effluent treatment containing dangerous substances M

This entry is chosen if this waste contains any dangerous substance(s) at the required levels.

2. a “specific reference to a dangerous substance(s), for example:

17 03 11\* bituminous mixtures containing coal tar M

These wastes are classified as hazardous by looking for a specific dangerous substance in the waste. In the example above that substance is coal tar. This entry is chosen only if this waste contains coal tar above specified threshold levels.

In the two examples above, if the “*mirror*” entry doesn’t contain general or specific dangerous substance(s) at the specified threshold levels, it is not hazardous and the appropriate non-hazardous 6-digit mirror code should be chosen.

The non-hazardous mirrors for our example above are:

07 01 12 sludges from on-site effluent treatment other than those mentioned in 07 01 11; and

07 03 02 bituminous mixtures other than those mentioned in 17 03 01

### ***“Non-hazardous (neither Absolute Hazardous nor Mirror Hazardous)***

This is an entry in the EWC without an asterisk. This entry is not hazardous. For example:

03 01 01 waste bark and cork

Steps 3 to 5 below only apply to finding out if the waste, listed with “*mirror*” entries, is hazardous or not.

#### **Step 3: Do you know what substances are in the waste?**

Most producers of a “*mirror*” entry waste should have enough information about the chemical substances in their waste to know if it is hazardous, for example from safety data sheets and knowing how the waste was produced.

If they do not know what substances are in their waste, they will need to test the waste for hazardous properties (see Step 4b)

#### **Step 4a: Are the substances in the waste “dangerous substances”?**

A “substance” is “dangerous” if it given a “risk phrase”. There are three ways to find out the “risk phrase”. There are three ways to find out the “risk phrase” for a substance.

1. Use Annex VI, Table 3.2 to the Classification, Labelling and Packaging of Substances Regulation (CLP) [4]. This shows risk phrases for many common chemicals [5]. Annex VI is the most important source for risk phrases.
2. Obtain or derive risk phrases from reliable data sources such as reference books or the internet. These sources must be “peer reviewed”, which means that other professionals have looked at and approved the data.
3. Use risk phrases from Safety Data Sheets or other similar sources

If none of the substances in your waste have “risk phrases” the waste is not hazardous [6] and the non-hazardous “*mirror*” EWC code can be used. If any of the substances have risk phrases, you will need to go to Step 5.

#### **Step 4b: Is there sufficient information to demonstrate that the waste is non-hazardous?**

If you do not know what is in the waste you will need to prove that it is non-hazardous. Otherwise, it should be considered hazardous.

[4] Regulation (EC) No 1272/2008

[5] Chemical is a common term for substances (a chemical element or one of its compounds, including any impurities) and preparations (a mixture of substances)

[6] The exception to this is clinical waste which could be H9 infectious as there are no risk phrases for infectious agents – see WM2 for further details

**Step 5: Does the waste possess any of the Hazardous Properties H1 to H15?**

Waste containing dangerous substances (those with risk phrases) may be hazardous if the concentrations of those substances are above specified thresholds. You can check by:

Testing, for example, checking the flashpoint of a liquid waste.

Comparing the concentration of the substances in your waste with the threshold values for their “risk phrases”.

Sometimes a combination of both of the above is needed. The test methods and threshold values are referenced in WM2.

The waste will be hazardous if:

- it contains a dangerous substance(s) with a concentration at or above the appropriate threshold; and/or
- a test or calculation shows a hazardous property

Waste will not be hazardous if:

- it contains a dangerous substance(s) but they are below the threshold limits and/or
- tests do not show a hazardous property.

If either of the above apply, the non-hazardous “*mirror*” entry should be used.

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## Appendix A Hazardous Properties

Wastes on the EWC are hazardous if they have one or more of the following hazardous properties:

- H1 “Explosive”:** substances and preparations which may explode under the effect of flame or which are more sensitive to shocks or friction than dinitrobenzene.
- H2 “Oxidizing”:** substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances.
- H3-A “Highly flammable”:**
- liquid substances and preparations having a flash point below 21°C (including extremely flammable liquids), or
  - substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or
  - solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition, or
  - gaseous substances and preparations which are flammable in air at normal pressure, or
  - substances and preparations which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities.
- H3-B “Flammable”:** liquid substances and preparations having a flash point equal to or greater than 21°C and less than or equal to 55°C.
- H4 “Irritant”:** non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation.
- H5 “Harmful”:** substances and preparations which, if they are inhaled and ingested, or if they penetrate the skin, may involve limited health risks.
- H6 “Toxic”:** substances and preparations (including very toxic substances and preparations) which, if they are inhaled or ingested or if they penetrate the skin, may involve serious, acute or chronic health risks and even death.
- H7 “Carcinogenic”:** substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence.
- H8 “Corrosive”:** substances and preparations which may destroy living tissue on contact.
- H9 “Infectious”:** substances containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms.
- H10 “Toxic for reproduction”:** substances and preparation which, if they are inhaled or ingested or if they penetrate the skin, may induce non-hereditary congenital malformations or increase their incidence.
- H11 “Mutagenic”:** substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce hereditary genetic defects or increase their incidence.
- H12** Wastes which release toxic or very toxic gases in contact with water, air or an acid.
- H13 “Sensitising”:** substances and preparations which, if they are inhaled or if they penetrate the skin, are capable of eliciting a reaction of hypersensitisation such that on further exposure to the substance or preparation, characteristic adverse effects are produced. [As far as testing methods are available].
- H14 “Ecotoxic”:** substances and preparations which present or may present immediate or delayed risks for one or more sectors of the environment.
- H15** Wastes capable by any means, after disposal, of yielding another substance, e.g. a leachate, which possesses any of the characteristics above.

## Appendix B Deciding that a waste listed as hazardous is non-hazardous and vice versa

The Northern Ireland Department of Environment can, in exceptional cases, decide:

- that a waste identified on the List of Wastes (EWC) should be hazardous waste, because it possesses hazardous properties;
- that a waste identified as hazardous on the List of Wastes should be non-hazardous, because it does not possess hazardous properties.

If you are in Northern Ireland and know about such waste, then you can contact the Hazardous Waste team in NIEA and provide detailed evidence to support this. NIEA can be contacted by telephone on (02890) 569710 or by email at [hazwaste@doeni.gov.uk](mailto:hazwaste@doeni.gov.uk)

Waste will only be classified after the appropriate organisations have been consulted. We will publish any decisions made by the Department of Environment for Northern Ireland.

Note that the Department of Environment for Northern Ireland will not treat waste as non-hazardous if it has been diluted or mixed with the aim of lowering the initial concentrations of hazardous substances to a level below the thresholds for defining waste as hazardous.

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