

# Fundamentals of Waste Classification

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# Overview

- Background
- EWC code
- Classifying Waste
- Properties of Waste
- Examples ....

# Background

- Misapplication of codes
- Changes in EWC codes
- Reports
- Records
- Disposal route of the waste



## Typical licence Condition

- "Licensee shall ensure that any waste generated/accepted on site, prior to transfer to another person or prior to acceptance on-site respectively, shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling"

# Classifying

## ■ Questions that holder need to answer

- Is it a Waste ?
- Is it a hazardous waste?
- Classify?
- How do I find out?
- How do I dispose of it? (destination route, packaging, Labelling, handling...)



Waste - Definition in WMA 1996

“ licensee shall classify, package and label ....

- Waste Classification tool  
(<http://www.epa.ie/whatwedo/resource/hazardous/class>)
- European Waste catalogue (EWC)  
[http://www.epa.ie/downloads/pubs/waste/stats/EPA\\_waste\\_catalogue\\_hazard\\_list\\_2002.pdf](http://www.epa.ie/downloads/pubs/waste/stats/EPA_waste_catalogue_hazard_list_2002.pdf))

### Other Regulations

- ADR
- IATA (ICAO)
- IMDG
- RID
- TFS regulations
- C1 Regulations



# EWC / Hazardous Waste List

## What is it ?

- 20 chapters
- Covers industries from Mining, Agriculture, Wood processing, Leather, Pharmaceutical, Thermal processes, Coatings, Packaging, Oil wastes, Municipal wastes etc
- Mirror Entries
- Hazardous unless proven otherwise...

# Steps to Classify



1.0 Identify the *source* generating the waste:

**Chap. 1-12 & 17-20**

Look at  
XXXX99  
LAST

Yes; EWC

NO

2.0 Identify *material specific* codes:

**Chap. 13, 14 & 15**  
(including XXXX99)

Yes; EWC

NO

3.0 Identify in “Wastes not otherwise specified in the list”

**Chap. 16** (including XXXX99)

Yes; EWC

Look at XX XX 99 from  
chapter's  
1 –12 & 17-20

NO

Yes; EWC

Separately  
Collected  
Packaging  
ALWAYS  
Chapter 15

# Mirror Entries

## ■ Mirror Entries

A waste type that

- Contains a dangerous substances is given one code \*
- Does not contain any dangerous substances is given another code (no\*)

## ■ Examples

- WWTP Sludge's from the Pharmaceutical Industry
  - EWC Code : 070512 or 070511\*
- Printer Toner Cartridges
  - EWC Code : 080318 or 080317\*





# EWIC Codes - Challenges

- Paper and cardboard
  - Municipal
    - 20 01 01
  - Packaging
    - 15 01 01
  - Waste Management Facilities
    - 19 12 01
  - Mixed Municipal Waste
    - 20 03 01



Which one is correct??

## EWC Codes - Changing the Code

"Licensee shall ensure that any waste generated/accepted on site, prior to transfer to another person or prior to acceptance on-site respectively, shall be classified, packaged and labelled in accordance with National, European and any other standards which are in force in relation to such labelling"

Waste in V Waste out

- Classification by source
- EWC code - changed if :
  - Wrong code assigned
  - Treatment applied (mechanical etc)

# Hazardous Waste Classification Tool

- Paper based tool;
- Located on EPA.ie
  - Classification is based on the knowledge of the waste - full composition, partial & their properties (risk phrases);
  - Divided into series of tabs ;
  - Only certain sections will be relevant ;
  - Follow the instructions within the tool for each section;
  - Generate a Worksheet detailing out the properties of the waste and their respective thresholds;
  - Tests may be required to classify the waste

## Aspects that are crucial in classification

- The properties of the substances in the waste (flammable, explosive, ecotoxic etc..)
- Concentrations of these (%w/w)

### Things to Look out For :

- Irritant and Harmful;
- Some properties have thresholds, some do not;
- Testing of waste;
- Data received;

### IMPACTS on the :

- Destination route;
- Classification;
- Packaging;
- Labelling;
- Handling;
- Recovery/Diposal site used;
- Reports / Records

## What has been Observed

- “**waste fixer**” from a hospital was accepted at a licensed facility under C1.
- indicated 26 boxes of EWC code of **070504\*** was accepted.

Pharmaceutical sector Code

o07 05 04 \* Other organic solvents, washing liquids & mother liquors

■ *"Licensee **shall ensure** that any waste **generated/accepted** on site, **prior to transfer** to another person or **prior to acceptance on-site** respectively, shall **be classified, packaged and labelled** in accordance with National, European and any other standards which are in force in relation to such labelling"*

Is this classified correctly ?

# Steps to Classify

1.0 Identify the *source* generating the waste:

Look at  
XXXX99  
LAST

**Chap. 1-12 & 17-20**  
(exclude codes ending  
with "99" !!!)

Yes; EWC

NO

2.0 Identify *material specific* codes:  
**Chap. 13, 14 & 15**  
(including XXXX99)

Yes; EWC

NO

3.0 Identify in "Wastes not  
otherwise specified in the list"  
**Chap. 16** (including XXXX99)

Yes; EWC

Look at XX XX 99 from  
chapter's  
1 -12 & 17-20

NO

Yes; EWC

Separately  
Collected  
Packaging  
ALWAYS  
Chapter 15

# Follow the Steps

- Identify the source of waste

- First need to go to Chapter 1- 12; & 17 - 20

Obvious choice is Chapter 18 - "Related research and human & animal health care"

Follow the Guide

## Chapter 09

- Waste from the Photographic Industry
  - 09 01 04 \* "Fixed Solutions"

## Example Two

- Dried Waste Sludge Classified as EWC 19 08 12  
19 08 12 - Sludges from biological treatment of industrial waste water other than those mentioned in 190811\*
- Moved to a transfer station
- Declared as Non hazardous treated dried WWTP Sludge
- Shipped Directly (after 3days)
- classified as 070513\* when shipped

Which is the correct classification and EWC code ?



19 08 12 ✓ 07 05 13\*

■ 19 08 12

Chapter 19

■ Waste from Waste management facilities, off site Waste Water treatment plants and the preparation of water intended for human consumption and water for Industrial use

19 08 12 - Sludges from biological treatment of industrial waste water other than those mentioned in 190811\*

■ 070513\*

Chapter 07

■ Waste from the organic Chemical process

07 05 13 \* Solid wastes containing dangerous substances from the MSFU of Pharmaceuticals

The EWC code should have remained at 190812;

## Example Three

### ■ Background

- Request from Licensee to declassify a waste stream from Hazardous to Non hazardous
- Submitted completed Hazardous Waste classification tool worksheet

### ■ Reason behind the reclassification

- Diversion of waste stream from incineration
- If not hazardous can go to landfill
- Cost

## Review of classification Tool

### Misapplied tool - Data Inadequacies

- Composition of the Waste
  - Data provided represents 20% of the waste; remaining 80%?
- Wrong properties used and amalgamated
- Not accounted for certain properties
  - 6.005% entered under 'Flash Point  $\leq 55^{\circ}\text{C}$ ' but substances had flash point of  $>200^{\circ}\text{C}$  and  $165^{\circ}\text{C}$
  - Etc..

## Can the waste be Declassified?

Too many discrepancies

Need to complete Waste Classification tool correctly

Use their data sources correctly

Full assessment of the waste not provided for

## Summary

- Classification assigned based on its source
- EWC in V EWC out
- Changes in EWC in transport chain
- Classification of waste challenges / concerns
- Records In V Records out

# Thank You

