

# Glass from waste treatment facilities

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This guidance has been produced to support permitting and compliance work at sites that are storing or treating waste glass from Materials Recycling Facilities (MRFs) and other waste treatment processes. Some waste glass outputs from these sites typically contain other wastes and it is misdescribed as waste glass.

This guidance explains how waste glass from mechanical treatment processes should be correctly described and coded and sets out the appropriate measures that are required for its storage and handling. It supports our published guidance on [Non-hazardous and inert waste: appropriate measures for permitted facilities](#).

This guidance also explains the relationship with other regimes such as the waste shipment requirements for exports, the Packaging Regulations and Materials Facilities requirements.

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## Coding and describing waste glass

It is important that waste glass from MRFs and other waste treatment processes is classified and coded correctly following the process set down in [Technical Guidance WM3 Guidance on the classification and assessment of waste \(WM3\)](#).

For waste classification, there is no acceptable or de-minimis level of contamination in single waste streams. If waste has other waste mixed in with it, then it is a mixed waste.

For waste to be coded as 19 12 05 glass it must have minimal contamination. If waste glass has not been properly sorted and still contains other wastes beyond minimal, it is a mixed waste. It must be classed as 19 12 11\* or 19 12 12 - waste glass containing other non-hazardous wastes.

The courts recognise that setting any definitive contamination level, threshold or percentage for a single waste stream is unfeasible and that it will be a matter of fact and degree in each case. For the purposes of this guidance, the amount of other waste mixed in with waste glass should be minimal. This is where non-glass waste is merely incidental (an occasional piece) within the load or stockpile.

We take this approach because waste sorting and separation processes are not 100% effective so the output will inevitably contain some waste that is not glass. However, with effective process design and management systems, waste glass is capable of being sorted so that any other wastes that remains after sorting is so small as to be minimal.

The following photographs are provided for indicative purposes only. A decision needs to be made on a case-by-case basis looking at the full load and stockpiles.





Glass from waste treatment facilities containing this level of contaminants indicates that the glass has not been properly sorted. It will need to undergo further sorting and processing to remove the non-glass waste. The contaminants are more than so small as to be minimal so the waste must be coded **19 12 11\*** or **19 12 12**.

In contrast the image below shows glass from a waste treatment process that has been properly sorted. In this case the amount of non-glass contaminants are so small as to be minimal and the waste can be coded **19 12 05**.





The processed glass in this picture contains contamination, it has been processed but it is borderline mixed waste. You would need to consider where the waste is going. If it's destined for aggregate manufacture, then it requires further processing to remove more of the non-glass waste. There is less of an issue if it is going to a glass remelt process where further processing will definitely take place to remove the contaminants.

**! Important** - visual assessment has an important role for waste streams like glass. It can be used as an initial assessment to determine if:

- the waste has been properly sorted and contains minimal contamination (19 12 05) or
- it is a mixed waste (19 12 11\*/12) which needs further processing and a mirror entry assessment.

However, you cannot check or decide the classification of a waste from a visual assessment alone. This is because a visual observation cannot reliably check the:

- activity that produced the waste, or
- hazardous property assessment.

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## Classifying mirror entry 19 12 11\* or 19 12 12 - waste glass containing other non-hazardous wastes

Waste code 19 12 11\* is a mirror hazardous entry and 19 12 12 is a mirror non-hazardous entry. This means the glass output needs to be assessed to demonstrate whether it is hazardous or non-hazardous waste. This must be done in accordance with [waste classification technical guidance \(WM3\)](#).

For mirror entry wastes, step 4 of WM3 requires that the chemical composition of the waste is determined. However, when the composition of the waste and its components is widely understood not to include hazardous substances, and visual inspections would easily identify materials likely to be hazardous, then the waste assessment may not need to include sampling and testing.

The waste producer would need to be able to demonstrate they fully understand the composition of their waste and explain the basis of their conclusion that the waste is non-hazardous. This waste assessment information should be collated into a Waste Classification Report and must include as a minimum:

- **Detailed information about the waste inputs:** For example, is the waste input black bag waste 20 03 01 or dry mixed recyclables? Dry mixed recyclables waste will be less likely to include hazardous items but there is still the risk of vapes and batteries finding their way into this waste stream.
- **Control measures for the waste inputs:** For example, the waste acceptance checks, processes and procedures that are in place.
- **Assessment of the outputs:** Details of the process and the contaminants being found in the glass fraction after sorting. This should include in what quantity they are present.
- **Justification as to why chemical analysis is not required or cannot be undertaken:** For example, the glass is from a dry mixed recyclable input which is mixed with paper, plastics, and metal cans only. Input and output waste is consistent.

Further guidance on coding and classification can be found in [WM3](#) and on the [Classification of Waste and Regulation of Hazardous Waste - Home \(sharepoint.com\)](#)

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## Regulatory requirements for sites receiving waste glass

### Waste exemptions

Waste exemptions T1, T4, U9, S1 and S2 only allow the storage, use or treatment of waste glass, coded 19 12 05 or 17 02 02 glass.

These exemptions do not allow waste glass containing other non-hazardous wastes, coded under 19 12 12. This is because the waste requires further processing and a greater level of control and mitigation to prevent environmental or amenity issues.

**! Important** - unless waste glass from mechanical treatment processes has been properly sorted so that it can be correctly coded as a 19 12 05, an exemption cannot be registered.

### Environmental Permit

Any operator wishing to store and handle (transfer, bulk or treat) waste glass containing other non-hazardous wastes from mechanical treatment processes, must have waste code 19 12 12 listed in their permit.

- 19 12 12 is a mirror code entry, so a Waste Classification Report is required.
  - Operators who intend to handle waste glass which is hazardous must also have waste code 19 12 11\* listed in their permit. Otherwise, waste glass which is hazardous, should be quarantined and sent to another permitted facility able to take it. [Systems and procedures](#) should be in place to ensure hazardous waste is not accepted and if accepted, is identified and segregated.
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## Regulatory Position statement (RPS)



RPS 292 allows operators who have a permit to handle 19 12 05 waste glass, to continue to take waste glass containing other wastes such as plastic/paper metal etc whilst a permit variation is determined to include 19 12 12.

The RPS conditions must be complied with, including:

- the operator notifying us of their intended reliance on the RPS
- us agreeing in writing to their use of the RPS.
- storing and treating waste glass containing other non-hazardous wastes on an impermeable surface with sealed drainage.
- having appropriate measures in place to prevent litter odour and pests.

We will issue an Environmental Permitting Regulations (EPR) 2016 Regulation 61 Notice to permit holders, requiring the information we need to carry out an Agency Initiated Variation. Operators must respond by the date specified in that notice.

The RPS 292 also allows operators who have registered the following exemptions before the date the RPS was published:

- T1 - Cleaning, washing, spraying, or coating relevant waste
- T4 - Preparatory treatments (baling, sorting, shredding etc.)
- S1 – Storage of waste in secure containers
- S2 - Storage of waste in a secure place
- U9 – Using waste to manufacture finished goods\*

to continue to store and treat waste glass containing other non-hazardous wastes whilst they apply for a permit. Exemption holders must apply for a permit by the date set out in RPS 292.

RPS 292 will then allow exemption holders to continue to operate whilst their permit application is determined.

Exemptions must have been registered before RPS 292 was published to use the RPS.

\* The U9 waste exemption is for the manufacture of finished goods from glass. The exemption does not allow any pre-treatment steps to clean up waste glass containing other non-hazardous wastes. Rather than requiring operators to register a T1 or T4 exemption to benefit from the RPS we have included U9. This allows operators to continue to process waste glass containing other non-hazardous wastes whilst they apply for a permit.

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## Environmental and amenity measures

Mixed waste containing waste glass has the following risks associated with it:

- odour
- litter
- pests such as flies, vermin, and scavenging birds
- leachates and polluting liquids

Waste glass that has not been fully processed to remove contaminants can contain organic matter and has the potential to produce odour and leachate if stored in the open.

If the level of organic matter contamination is high, it can also attract pests such as birds, vermin, and flies.

These risks need to be fully managed and mitigated which is why a permit and not an exemption is the appropriate level of control.

The level of mitigation and control required at a site will relate to the:

- proximity of sensitive receptors
- whether there is a history of amenity complaints about operations at the site, and
- compliance history.



## Sites accepting 19 12 11\*/12 mixed waste outputs



If an operator is accepting waste glass that has not been fully processed to remove contaminants. They must as a minimum meet the following requirements.

1. The reception, storage and handling areas must be on an impermeable surface with sealed drainage.
2. There must be a dedicated reception, storage, and handling area for the glass waste. This area must be designed so that it can be easily maintained and cleaned.
3. The reception, storage and handling areas and the drainage systems must be cleaned regularly (this may involve use of detergents), to prevent, or where that is not practicable to minimise the presence of pests and odours both on site and which are likely to cause pollution or nuisance outside the boundary of the site.
4. Leachates and liquids from drainage systems or sealed sumps which are sent for offsite disposal must be coded as either 16 10 01\* or 16 10 02.
5. Regular litter checks should be in place to minimise and manage litter from plastic and light non-glass fractions. Measures such as litter netting may be required where the waste is stored in the open, particularly on exposed and sensitive sites.
6. The operator should implement and regularly review an odour management plan. Guidance on [odour management plans](#) and [odour management](#) is available on gov.uk.
7. Waste glass containing other non-hazardous wastes can attract pests. At sites where pests are an issue, a specific pest management plan will be required. Guidance on [pest management plans](#) is available on gov.uk.

**! Important** Storage and processing of waste glass containing other non-hazardous wastes may need to be carried out within an enclosed building if it is causing odour and sensitive receptors are nearby. There may also be a requirement for odour abatement.

Further guidance on emissions management can be found in [section 6 of the non-hazardous and inert waste appropriate measures guidance](#).

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## Exporting waste glass

Waste glass is exported for recovery. Recent checks of shipments of waste glass from MRFs and waste treatment facilities have identified more than minimal levels of contamination. Exports are misdescribed and wrongly coded as waste glass only.

Waste glass containing other non-hazardous wastes cannot be exported using the code B2020 (glass waste in non-dispersible form) under Article 18 'Green List' controls. It must be coded as Y46 (wastes collected from households). If destined for an OECD or European country, it will be subject to the Amber list controls (notification controls with prior informed consent).

The export of waste glass containing other non-hazardous wastes classified as Y46 to non-OECD countries is **prohibited**.

Waste glass correctly classified as B2020 may be exported to non-OECD countries under Article 18 "green list" controls but may also require the notification and prior consent of all countries involved in the export (including transit countries). Such exports may also be prohibited. You will need to check the [waste exports control tool](#) or [Askshipments](#).

If a shipment is deemed non-compliant, it may be held at the port, either here in the UK, or overseas pending repatriation. The exporter is likely to incur costs associated with any storage and repatriation.



The above photo shows waste glass containing other non-hazardous wastes from a MRF. This was incorrectly exported using Article 18 "green list" controls as B2020.

Further advice on [exporting wastes](#) can be found on gov.uk.

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## Packaging Regulations and PRNs / PERNs

Under the Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (as amended) a reprocessor or exporter of UK sourced packaging waste can apply for accreditation. This allows accredited reproducers and exporters to issue electronic packaging waste recovery notes (ePRNs) and electronic packaging waste export recovery notes (ePERNs) to obligated businesses and compliance schemes for each tonne of packaging waste reprocessed or exported for reprocessing.

Businesses and compliance schemes obtain ePRNs or ePERNs to show that they have met their packaging recovery and recycling obligations. An accredited reprocessor or exporter can charge for this service.

ePRNs and ePERNs may only be issued on UK waste packaging. They are issued on material type such as plastic, paper and aluminium etc.

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## When ePRNs and ePERNs can be issued on glass

Glass ePRNs may be issued by an accredited reprocessor when the glass packaging waste has been received for recycling into new products, or into materials that need no further processing and meet [end of waste status](#). For waste glass it meets end of waste status when it is processed in accordance with [End of Waste Regulation for Glass Cullet](#). After 1 January 2021 and the EU exit, the UK kept the EU regulations for glass cullet.

Glass ePERNs may be issued when the glass packaging waste has been exported for recycling by an accredited exporter.

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## Conditions of accreditation

An accredited reprocessor or exporter must adhere to their Conditions of Accreditation (CoA). One of the CoA is that any ePRNs or ePERNs issued by a reprocessor or exporter must only be issued on waste that is processed in compliance with their environmental permit or exemption and exported in compliance with waste shipment controls.

When ePRNs/ePERNs are issued on waste that has been misdescribed, this may be a breach of their environmental permit, exemption, or the waste export legislation and therefore the accredited operator's CoA. The ePRNs/ePERNs may be deemed invalid and the accredited operator may be subject to enforcement action, including suspension or cancellation of their accreditation.

[Packaging waste: apply to be an accredited reprocessor or exporter](#) provides information on to become accredited, the packaging waste requirements and our enforcement powers.



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## Plastic, paper, cardboard, and metal

This guidance is written specifically for glass output from waste treatment sites. However, the same principles apply to other single waste outputs such as plastic, paper, card, and metal fractions.

Waste coded as any of the following:

- 19 12 01 paper and cardboard
- 19 12 02 ferrous metal
- 19 12 03 non-ferrous metal
- 19 12 04 plastic and rubber

must only contain minimal contamination, having regard to the quantity, nature and quality of the contamination which remains after sorting.

If the waste has not been properly sorted and the contamination is more than minimal - it is a mixed waste. It must be classed as 19 12 11\* or 19 12 12 mixed waste containing plastic/paper/card/metal.

The same requirements for export and packaging regulations will also apply to these wastes if they have not been properly sorted and the contamination is more than so small as to be minimal.

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## Materials Facilities (MF)

Materials Facilities (MFs) are a sub-set of MRFs which receive mixed waste material to separate or consolidate it into specified output material for the purpose of selling or transferring it to others for recycling.

Under Schedule 9 of [The Environmental Permitting \(England and Wales\) Regulations 2016 \(the EPR\)](#), MFs which receive more than 1,000 tonnes of mixed waste for sorting have notification, sampling and reporting obligations to the Environment Agency. In summary they must:

- notify us if they received mixed waste material\* of 1,000 tonnes or more;
- sample the waste entering and leaving the facility and record and report the information to us; and
- keep records for 4 years.

\*Mixed waste material is defined under the EPR (Sched 9, Part 2, para 2(1)) as

- waste originating from households, or other sources but is similar to household waste in terms of nature or composition; and

- consisting in the largest proportion of a mix of two or more of the four target materials: (i) glass; (ii) metal; (iii) paper; (iv) plastic.

Specified output material is a batch of material that is produced from processing mixed waste material that is made up of glass, metal, paper or plastic.

Further guidance on whether a facility is a MF and needs to notify, sample and report can be found in the [WRAP sampling and testing guidance for Materials Facilities](#).

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## Changes to the EPR

From 1 October 2024, changes to the EPR will come into force and more materials facilities will need to notify, sample, and report their waste. Operators of MFs will have to notify us in writing if they receive 1,000 tonnes or more of any waste material, mixed or not.

The current waste input materials will increase from 4 to 10. These are glass, aluminium, steel, paper, card, plastic bottles, plastic pots, tubs and trays, film or other flexible plastic, other plastic, fibre-based composite material.

[Sampling and reporting requirements from October 2024](#) will be more detailed and more frequent. Records for information recorded after 1st October 2024 will need to be kept for 7 years.

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