

# END-OF-WASTE CRITERIA FOR POLY(ETHYLENE PHTHALATE) RECYCLATE



## SINGLE CASE DECISION FOR SHABRA RECYCLING LIMITED

This document sets out end-of-waste criteria for  
poly(ethylene phthalate) (PET) recyclate,  
produced by Shabra Recycling Limited.

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Decision establishing End-of-Waste Criteria  
under  
Article 28 of the European Communities (Waste Directive) Regulations 2011  
for  
poly(ethylene phthalate) (PET) recyclate  
produced by  
Shabra Recycling Limited,  
Killycard Industrial Estate,  
Bree,  
Castleblayney,  
Co. Monaghan.  
Decision Date: 15<sup>th</sup> October 2019

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# 1 Introduction

Article 6 of the Waste Framework Directive, 2008<sup>1</sup> was transposed into Irish law by the European Communities (Waste Directive) Regulations 2011<sup>2</sup>. The Article 28(3) of the Regulation assigns responsibility to the Environmental Protection Agency to make certain decisions regarding end-of-waste.

## 1.1 What are end-of-waste criteria?

End-of-waste is a means of determining the point at which, for the purposes of waste regulation, a material need no longer be classified as waste after it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the specific conditions as outlined in the Regulation.

## 1.2 Complying with the end-of-waste criteria

Compliance with the criteria as outlined in this document is sufficient to ensure that PET recycle flake may be used as a secondary raw material without the need for waste regulation or control.

## 1.3 When end-of-waste compliant material may become waste

Shabra Recycling Limited (as processors) and users of PET recycle flake should note that, even if the end-of-waste criteria has been complied with, the material will become waste again, and subject to waste management controls if:

- 1.3.1 it is discarded or there is an intention or requirement to discard, for example if it is disposed of;
- 1.3.2 it is stored indefinitely with little possibility of being used;
- 1.3.3 it is mixed with other waste materials; or
- 1.3.4 the producer cannot provide documented evidence of compliance with these end-of-waste criteria.

## 1.4 Updating the criteria

These end-of-waste criteria may be reviewed and updated by the EPA at any stage based on the experience of practical applications, technological developments or legislative amendments. The EPA reserves the right to depart from the position outlined and to take appropriate action to avoid overall adverse environmental or human health impacts. If at any time the European Commission publishes generally applicable end-of-waste criteria for PET recycle flake, those European criteria may supersede these criteria and the EPA may withdraw this decision.

## 1.5 Exporting end-of-waste compliant material

These end-of-waste criteria are applicable in Ireland only. If exporting the material, it should be noted that countries of transit and/or destination may take a different view and the end-of-waste criteria may not be recognised. If the competent authority in the country of transit and/or

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<sup>1</sup> Waste Framework Directive - Directive 2008/98/EC on waste (WFD)

<sup>2</sup> Waste Directive Regulations - European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011)

destination considers the material to be waste, the shipment may, if required by that competent authority, be subject to the controls set out in the Waste Shipment Regulation<sup>3</sup>.

## 1.6 Application

The primary applications for the PET recyclate are:

- thermoformed packaging,
- non-woven fibres,
- strapping,
- strawberry punnets,
- wadding for pillows and bedding,
- the securing of products on shipping pallets.

The PET recyclate flake will not be used directly in the manufacture of food grade plastics. Where the PET recyclate flake is to be used in the manufacture of punnets, or other food grade plastics, it will have been cleaned sufficiently to be processed in accordance with a U.S. Food and Drug Administration (FDA) approved extrusion process. Where this FDA approved extrusion processes is not in place, an ABA layered sheeting process may be applied whereby the PET recyclate flake (layer B) is sandwiched between two layers of virgin material (layers A) and will not be in contact with any food stuffs .

## 1.7 Interpretation

This decision document is for the purposes of article 28 of the European Communities (Waste Directive) Regulations 2011 only and nothing in this document shall be construed as negating Shabra Recycling Limited or users' statutory obligations or requirements under any other authorisations, enactments or regulations.

## 2 Decision and Reasons for the Decision

The EPA has decided, in accordance with article 28(3) of the European Communities (Waste Directive) Regulations 2011, that the PET recyclate flake (as defined in the glossary) the subject of the application made by Shabra Recycling Limited, on the 22<sup>nd</sup> March 2019 and produced at a local authority authorised facility operated by Shabra Recycling Limited will cease to be waste if it complies with the end-of-waste criteria set out in this document.

The EPA is satisfied, based on:

- the information provided by the applicant, including additional information;
- National Standards Authority of Ireland (NSAI) Standard IS EN 15348:2014: *Plastics – Recycled plastics - Characterization of Poly(ethylene terephthalates) PET recyclates*;
- Joint Research Centre, 2009 Final Report on “End-of-waste criteria”; and
- Joint Research Council, 2014 Technical Report on “End-of-waste criteria for waste plastic for conversion”,

that, subject to compliance with the requirements of this decision, the PET recyclate flake conforms with the requirements of article 28(1)(a) & (b) of the Regulation and its use as a raw

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<sup>3</sup> Waste Shipment Regulations - Waste Management (Shipments of Waste) Regulations, 2007 (SI No. 419 of 2007)

material in the manufacture of plastic products will not lead to overall adverse environmental and human health impacts.

## 3 Materials Handling & Control

### 3.1 Waste Inputs

3.1.1 Inputs shall be restricted to waste plastics as per the List of Waste:

- Plastic packaging 15 01 02,
- Plastic and rubber 19 12 04<sup>4</sup>, and
- Plastics 20 01 39.

3.1.2 Waste plastics containing, or which has been contaminated by any substance listed in Annex IV of Regulation (EC) No. 850 of 2004 (on persistent organic pollutants) shall be immediately moved to a designated quarantine area and stored pending consignment to an appropriately authorised waste management facility for disposal or recovery.

### 3.2 Treatment Process

3.2.1 All processes (such as de-baling, sorting, separating, size reducing, cleaning, melting, filtering, re-granulating and grading) which are required in order to obtain the PET recyclate flake shall be completed in accordance with waste regulatory controls.

### 3.3 Quality of PET Recyclate Flake

3.3.1 The PET recyclate flake shall comply with the relevant product technical standard(s) and customer specification.

3.3.2 The relevant product standard for PET recyclate flake is IS EN 15248:2014: *Plastics – Recycled plastics - Characterization of Poly(ethylene terephthalates) PET recyclates*. As Standards are subject to regular review, it is the producer and user's responsibility to ensure that the latest version is referred to.

3.3.3 The non-plastic component in the PET recyclate flake shall be less than or equal to 2% of moisture-free weight<sup>5</sup>.

3.3.4 The PET recyclate flake shall:

- i. comply with relevant provisions of the CLP<sup>6</sup> regulation;
- ii. comply with relevant provisions of the REACH<sup>7</sup> regulation; and
- iii. comply with relevant provisions of the POPs<sup>8</sup> Regulation.

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<sup>4</sup> Rubber is not permitted as a waste input.

<sup>5</sup> End-of-waste criteria for waste plastic for conversion. Technical proposals. 2014 available at <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC91637/2014-jrc91637%20.pdf>

<sup>6</sup> Classification, Labelling and Packaging - Regulation (EC) No 1272/2008 (CLP)

<sup>7</sup> Registration, Evaluation, Authorisation and Restriction of Chemicals - Regulation 1907/2006/EC (REACH)

<sup>8</sup> Persistent Organic Pollutants - Regulation 850/2004/EC (POPs)

## 4 Demonstrating compliance with the decision establishing end-of-waste criteria

Shabra Recycling Limited shall be able to demonstrate compliance with the requirements of this decision. If unable to do so the PET recyclate flake will be considered a waste.

### 4.1 Records Management

In order to be able to demonstrate compliance with these end-of-waste criteria, the following records of production, testing and sale or supply of the PET recyclate flake shall be maintained;

- 4.1.1 Training records shall be maintained which demonstrate that all relevant persons have been appropriately trained in all aspects of these criteria, including the product standards.
- 4.1.2 Environmental & Quality Management: The following procedures and records of quality assurance shall be maintained.
  - i. a procedure for on-site waste plastic acceptance, storage and processing;
  - ii. a procedure for complying with customer specifications as required;
  - iii. details of the quality assurance system which is in place to comply with the relevant product standard;
  - iv. a procedure for sampling and analysis of the PET recyclate flake to establish the content and nature of any contaminant components. The procedure shall include:
    - a) the types of testing for each product;
    - b) the process for determining sampling frequencies, and
    - c) sampling and testing frequency.
  - v. a procedure(s) for the use, control, calibration and maintenance of inspection, measuring and test equipment shall be set up and followed. Equipment shall be uniquely identified.
  - vi. a procedure for the identification and management of non-conforming PET recyclate flake.
- 4.1.3 In order to demonstrate that the PET recyclate flake does not pose a risk to the environment or human health, the producer shall make available;
  - i. the results of any analysis carried out;
  - ii. interpretative reports including lab results;
  - iii. details of the test methods used;
  - iv. details of accreditation of the test method;
  - v. details of accreditation of laboratory;

- vi. independent audit reports demonstrating the outcome of any independent audit of the plastics processing shall be made available for inspection; and
- vii. if contaminants are identified, details of the actions taken to correctly dispose of the non-conforming load(s) and corrective action(s) taken prior to dispatch and to prevent any such recurrence.

4.1.4 A register of non-conforming products i.e. a product that does not meet the requirements the IS EN Standard or these criteria shall be maintained. The register shall contain information as to the reasons for the non-conformance and the manner in which the non-conformance was rectified. The register should also include information on the outlet for the non-conforming product, i.e. re-introduced to the start of the process, disposed of, or recovered as waste.

4.1.5 A 'declaration of conformity' shall be completed for each consignment of PET recyclate flake leaving the facility. The declaration of conformity shall;

- i. include a product description;
- ii. include a signed and dated declaration which declares that the material has achieved end-of-waste status in accordance with the EPA decision (decision title and date of decision);
- iii. state that the relevant provisions of POPs, REACH and CLP regulations have been complied with;
- iv. state the relevant provisions of the appropriate product technical standard(s) and customer specifications to which the PET recyclate flake has been complied with. Details of the name of the specific standard(s) and specification(s) which are being applied are to be included;
- v. state any restrictions on use;
- vi. state the date of supply;
- vii. state the customer's name and contact details;
- viii. state the quantity supplied by weight / volume;
- ix. be issued in electronic form;
- x. be issued prior to the PET recyclate flake leaving the facility; and
- xi. be accompanied by or contain a link to an electronic copy of the safety data sheet for the PET recyclate flake.



- 4.1.6 CLP, POPs, REACH and food contact regulations<sup>9</sup>: The producer shall maintain documentary evidence, for assessment by the relevant competent authority which demonstrates compliance, where appropriate, with the provisions of the POPs, CLP, REACH and food contact regulations. The producer shall ensure these matters are addressed in customer supply contracts.
- 4.1.7 Retention of Records: All records including controls, inspections and training shall be maintained for a minimum of 5 years.
- 4.1.8 Storage of Records: Records including any electronic media shall be stored and maintained in a manner that they are readily retrievable and protected against damage, deterioration or loss. Records shall be legible, identifiable and traceable to the process or product. All reviews and revisions of procedures are to be included in an annex to the most up to date version of that procedure.

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<sup>9</sup> European Union (Plastics and other materials) (Contact with food) Regulations 2017 as amended

## Appendix A: Glossary of Terms

Applicant	Shabra Recycling Limited, Killycard Industrial Estate, Bree, Castleblayney, Co. Monaghan.
Authorised waste facility	A facility which has been granted a waste authorisation in the form of an Industrial Emissions licence, a waste licence, a waste facility permit or a certificate of registration.
CLP	Classification, Labelling and Packaging: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008
Consignment	Each load of PET recyclate flake that leaves the facility.
Declaration of Conformity	A declaration that the PET recyclate flake conforms to end-of-waste criteria, product standards and specifications, it includes details of restriction on use of the recyclate.
Facility	Shabra Recycling Limited, Killycard Industrial Estate, Bree, Castleblayney, Co. Monaghan.
Recycled Material/Recyclate	PET recyclate flake that meets these end-of-waste criteria.
Groundwater	Means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Non-plastic component	Any material that is not plastic but is present in waste plastic before recycling.
Producer	Shabra Recycling Limited, Killycard Industrial Estate, Bree, Castleblayney, Co. Monaghan.
POPs	Persistent organic pollutants: Regulation 850/2004/EC.
REACH	Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
Recovery	As defined in the Waste Management Act 1996 as amended.
Recycling	As defined in the Waste Management Act 1996 as amended.
Surface Water	Means inland waters, except groundwater, transitional waters and coastal waters, except in respect of chemical status for which it shall also include territorial waters.
User	User means construction companies, manufacturers, contractors and all those organisations or individuals responsible for the end use of the PET recyclate flake.
Waste	As defined in the Waste Management Act 1996 as amended.