

END-OF-WASTE CRITERIA FOR GRADED WOOD BRIQUETTES

SINGLE CASE DECISION FOR CONROY GROUP (T/A FLAMERS)

This document sets out end-of-waste criteria for
graded wood briquettes,
produced by Conroy Group (T/A Flamers).

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Decision establishing End-of-Waste Criteria
under
Article 28 of the European Union (Waste Directive) Regulations 2011-2020
for
graded wood briquettes
produced by
Conroy Group (T/A Flamers), Sonna, Mullingar, County Westmeath.

Decision Date: 01 June 2021

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1 Introduction

This introduction is not part of the decision and does not purport to be a legal interpretation of the decision.

Article 6 of the Waste Framework Directive, 2008, as amended was transposed into Irish law by the European Union (Waste Directive) Regulations 2011-2020 (hereafter referred to as the Regulations). Article 6 (End-of-waste status) of the Waste Framework Directive 2008/98/EC1 as amended by Directive 2018/851, was transposed into Irish law via Part 3 Regulation 28 (End-of-waste) of the European Union (Waste Directive) Regulations 2011-2020. Article 28 of the Regulations assign responsibility to the Environmental Protection Agency to make certain decisions regarding end-of-waste.

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 operation, including recycling, and complies with specific criteria developed in accordance with the specific conditions outlined in the Regulations. Compliance with the end-of-waste criteria, as outlined in this document, is sufficient to ensure that graded wood briquettes may be used as a secondary material without the need for waste regulation or control. The graded wood briquettes may only be sold and used as a fuel product to provide heating in residential, small commercial or public building settings.

These end-of-waste criteria may be reviewed and updated by the Agency at any stage based on the experience of practical applications, technological developments or legislative amendments. The Agency 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 graded wood briquettes, those European criteria may supersede these criteria and the Agency may withdraw this decision. These end-of-waste criteria are only applicable in Ireland.

The material shall become waste again and subject to waste management controls if:

- it is discarded or there is an intention or requirement to discard, for example if it is disposed of;
- it is stored for a period greater than may be specified in the end-of-waste criteria;
- it is mixed with other waste materials; or
- the producer cannot provide documented evidence of compliance with these end-of-waste criteria.

This decision document is for the purposes of article 28 of the European Union (Waste Directive) Regulations 2011-2020 only and nothing in this document shall be construed as negating Conroy Group or users' statutory obligations or requirements under any other authorisations (including planning permission), enactments or regulations.

The decision sets out in detail the end-of-waste criteria for the production of graded wood briquettes by Conroy Group T/A Flamers.

2 Decision

The Agency has decided, in accordance with article 28(3) of the European Union (Waste Directive) Regulations 2011-2020 that the 'Class B' graded wood briquettes (as defined in

Appendix 1), the subject of the application made by Conroy Group on the 17/08/2018, and produced at an appropriately authorised waste facility operated by Conroy Group, will cease to be waste if it complies with the end-of-waste criteria set out in this document.

The Agency is satisfied, based on:

- information provided by the applicant, including additional information;
- National Standards Authority of Ireland (NSAI) Standards:
 - *IS EN ISO 17225-1: Solid Biofuels — Fuel Specifications and Classes — Part 1: General Requirements*; and,
 - *IS EN ISO 17225-3: Solid Biofuels — Fuel Specifications and Classes — Part 3: Graded Wood Briquettes*;
- Agency's May 2020 Draft Guidance on End-of-Waste; and
- Joint Research Centre, 2009 Final Report on "End-of-waste criteria",

that, subject to compliance with the requirements of this decision, the graded wood briquettes conform with the requirements of article 28(1)(a) and article 28(2) of the Regulation and their use as a fuel will not lead to overall adverse environmental and human health impacts.

3 Materials Handling and Control

3.1 Waste inputs

3.1.1 Inputs shall be restricted to the following waste wood List of Waste (LoW) codes:

- 03 01 05 - sawdust, shavings, cuttings, wood, particle board and veneer other than those containing hazardous substances;
- 03 03 01 - waste bark and wood;
- 15 01 03 - wooden packaging (pallets); and
- 17 02 01 - wood (from construction and demolition waste).

3.1.2 Hazardous waste shall not be used as an input.

3.1.3 Input waste wood shall not be visibly treated or contain any markings to indicate treatment.

3.1.4 Input waste wood shall comply with permissible inputs as specified in *IS EN ISO 17225-3* for 'Class B' graded wood briquettes:

- 1.1 Forest, plantation and other virgin wood;
- 1.2 By-products and residues from wood processing industry; and/or
- 1.3.1 Chemically untreated used wood.

3.1.5 Each batch of the waste input shall be assigned a unique identifier. Testing of the waste input shall include:

- i. analysis of each batch of shredded/milled and dried waste via XRF;
- ii. verification analysis of each batch of the shredded/milled and dried waste at a laboratory accredited to *EN ISO/IEC 17025*, using an accredited test method,

where available, and in accordance with test method requirements specified within *IS EN ISO 17225-3 Solid Biofuels — Fuel Specifications and Classes — Part 3: Graded Wood Briquettes* are applicable to the production of 'Class B' graded wood briquettes.

- iii. analysis under items i and ii above and shall comply with the criteria set out in *Appendix 2: Sample Analysis*.
- iv. deviations between XRF testing and accredited laboratory testing results shall be less than +/- 10%.

3.2 Recovery process

3.2.1 The recovery processes shall include manual sorting, shredding, screening, milling, drying, and briquette manufacture. These processes are required to produce the graded wood briquettes in accordance with waste regulatory requirements including requirements relating to compliance with the waste authorisation for the facility in which the material is produced.

3.3 Quality of graded wood briquettes

3.3.1 The graded wood briquettes shall comply with the relevant product technical standard(s), legislative requirements and customer specifications for supply, sale and direct use as a fuel.

3.3.2 Each batch of the graded wood briquettes shall be assigned a unique identifier. Testing of the graded wood briquettes shall include:

- i. analysis of each batch of the graded wood briquettes via XRF;
- ii. verification analysis of each batch of the graded wood briquettes at a laboratory accredited to *EN ISO/IEC 17025*, using an accredited test method, where available, and in accordance with test method requirements specified within *IS EN ISO 17225-3 Solid Biofuels — Fuel Specifications and Classes — Part 3: Graded Wood Briquettes* are applicable to the production of 'Class B' graded wood briquettes;
- iii. test under items i and ii above shall comply with the criteria set out in *Appendix 2: Sample Analysis*; and
- iv. deviations between XRF testing and accredited laboratory testing results shall be less than +/- 10%.

3.3.3 The graded wood briquettes shall:

- i. comply with relevant provisions of the CLP¹ Regulation;
- ii. comply with relevant provisions of the REACH² Regulation; and
- iii. comply with relevant provisions of the POPs³ Regulation.

As regulations are subject to amendment and replacement, it is the producer and the user's responsibility to ensure that current regulations are referred to.

¹ Classification, Labelling and Packaging - Regulation (EC) No 1272/2008 (CLP).

² Registration, Evaluation, Authorisation and Restriction of Chemicals - Regulation 1907/2006/EC (REACH).

³ Persistent Organic Pollutants Regulation (EU) No. 2019/1021 (POP).

- 3.3.4 The graded wood briquettes shall not be stored for a period greater than 24 months and products that exceed the time limit for storage shall be deemed to be waste.

4 Demonstrating Compliance with the Decision Establishing End-of-Waste Criteria

Conroy Group shall demonstrate compliance with the requirements of this decision and if unable to do so the graded wood briquettes will be considered a waste.

4.1 Records management

To demonstrate compliance with these end-of-waste criteria, the following records of production, testing and sale or supply of the graded wood briquettes shall be maintained:

- 4.1.1 A quality management system shall be implemented to demonstrate compliance with the end-of-waste criteria.
- 4.1.2 The quality management system shall be certified by a body accredited by the Irish National Accreditation Board.
- 4.1.3 The quality management system shall include a set of documented procedures concerning each of the following aspects:
- i. sampling and analysis of the input waste wood to establish the content and nature of any contaminant components. The procedure shall include:
 - a) the types of testing for the input waste;
 - b) the process for determining sampling frequencies; and
 - c) sampling and testing frequency.
 - ii. sampling and analysis of the output material (graded wood briquettes) to establish the content and nature of any contaminant components and monitor the quality of the output resulting from the recovery operation. The procedure shall include:
 - a) the types of testing for the product;
 - b) the process for determining sampling frequencies; and
 - c) sampling and testing frequency.
 - iii. monitoring of the treatment processes and techniques.
 - iv. acceptance control of waste used as input for the recovery operation.
 - v. feedback from customers concerning the product quality.
 - vi. record keeping of the results of monitoring conducted under points (i) to (v).
 - vii. review and improvement of the quality management system.
 - viii. training of staff.
 - ix. compliance with the relevant product technical standards, legislative requirements and customer specifications.
 - x. use, control, calibration and maintenance of inspection, measuring and test equipment. Equipment shall be uniquely identified.

- xi. identification and management of non-conforming graded wood briquettes.
- 4.1.4 Training records shall be maintained to demonstrate that all relevant persons have been appropriately trained in all aspects of these criteria, including the relevant product standard(s), legislative requirements and customer specifications.
- 4.1.5 In order to demonstrate that the graded wood briquettes do 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 the accreditation of the test method;
 - v. details of the accreditation of the laboratory;
 - vi. independent audit reports demonstrating the outcome of any independent audit of the graded wood briquettes processing shall be made available for inspection; and
 - vii. if contaminants above the allowable limits 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.
- 4.1.6 A register of non-conforming products for 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 shall also include information on the outlet for the non-conforming product for example whether it is re-introduced to the start of the process, disposed of, or recovered as waste.
- 4.1.7 A 'statement of conformity' shall be completed for each consignment of graded wood briquettes leaving the facility. The statement of conformity shall:
- i. include the producers of the graded wood briquettes details;
 - ii. include a product description and the unique identifier for each batch included in the consignment;
 - iii. include a statement that the consignment meets the criteria referred to in this decision (End-of-waste Decision ART28-0031);
 - iv. state that the producer of the graded wood briquettes applies a management system complying with the requirements of this decision (End-of-waste Decision ART28-0031), and which has been verified by an accredited conformity assessment body or by an environmental verifier or, where graded wood briquettes which has ceased to be waste is imported into the customs territory of the Union, by an independent external verifier;
 - v. state that the relevant provisions of CLP Regulation and REACH Regulation have been complied with, and POPs Regulation where applicable;
 - vi. state the relevant provisions of the appropriate product standard(s) and customer specifications to which the graded wood briquettes have been complied with. Details of the name of the specific technical standard(s) and specification(s) which are being applied are to be included;

- vii. state any restrictions on use;
 - viii. state the date of supply;
 - ix. state the customer's name and contact details;
 - x. state the quantity supplied by weight/volume;
 - xi. be issued in electronic form;
 - xii. be issued prior to the graded wood briquettes leaving the facility;
 - xiii. be accompanied by or contain a link to an electronic copy of the safety data sheet for the graded wood briquettes; and
 - xiv. be signed and dated by the producer of the graded wood briquettes certifying that the above information is complete and correct.
- 4.1.8 The producer shall transmit the statement of conformity to the next holder of the consignment. They shall retain a copy of the statement of conformity for at least one year after its date of issue.
- 4.1.9 The producer shall maintain documentary evidence, for assessment by the relevant competent authority which demonstrates compliance, where appropriate, with the provisions of the CLP Regulation and REACH Regulation, and POPs Regulation where applicable. The producer shall ensure these matters are addressed in customer supply contracts.
- 4.1.10 All records including controls, inspections and training shall be retained for a minimum of 5 years.
- 4.1.11 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 shall be included in an annex to the most up to date version of that procedure.
- 4.1.12 The producer shall, upon request, provide competent authorities including the Agency, relevant local authorities, and the Health and Safety Authority (HSA) access to the quality management system, including statement of conformity.

5 Use and Restrictions on Use

Users of graded wood briquettes that are produced in compliance with these criteria shall take full account of any environmental impact resulting from such use.

To comply with these criteria, the following restrictions apply:

- use in residential, small commercial or public building settings only, excluding baking ovens; and
- use in stoves, fireplaces, cookers, room heaters and multifired sauna stoves, which are tested according to European standards *EN 12809*, *EN 12815*, *EN 13229*, *EN 13240*, *EN 15250* and *EN 15821*, and boilers systems tested according to *EN 303-5*.

These criteria do not affect the obligation of producers to hold and comply with a waste collection permit, certificate of registration, waste facility permit or waste/industrial emissions licence or any other National or European legislation which may apply when transporting, storing or processing waste. These criteria do not affect permitting or any other legal requirements that do not depend on the status of the material as a waste.

Appendix 1: Glossary of Terms

Applicant	Conroy Group (T/A Flamers), Sonna, Mullingar, Co. Westmeath.
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.
'Class B' graded wood briquettes	Recovered briquettes conforming to the specifications and requirements for classification as 'Class B' graded wood briquettes as set out under <i>IS EN ISO 17225-3: Solid Biofuels — Fuel Specifications and Classes — Part 3: Graded Wood Briquettes</i> .
CLP Regulation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Consignment	Each load of graded wood briquettes that leaves the facility.
EN ISO 17225-3	IS EN ISO 17225-3: Solid Biofuels — Fuel Specifications and Classes — Part 3: Graded Wood Briquettes.
Hazardous Waste	As defined in the Waste Management Act 1996, as amended.
Non-Conforming Product	A product that does not meet the requirements of the product technical standard(s) or legislative requirements as appropriate.
POP Regulation	Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.
Producer	Conroy Group (T/A Flamers), Sonna, Mullingar, Co. Westmeath.
REACH Regulation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
Recovered Material	Graded wood briquettes that meet these end-of-waste criteria.
Recovery	As defined in the Waste Management Act 1996 as amended.
Recycling	As defined in the Waste Management Act 1996 as amended.

Statement of Conformity	A statement that the graded wood briquettes conforms to end-of-waste criteria, product standards and specifications, and includes details of restrictions on the use of the graded wood briquettes.
User	User means supply companies, contractors and all those organisations or individuals responsible for the end use of the graded wood briquettes.
Waste	As defined in the Waste Management Act 1996 as amended.
XRF	X-ray fluorescence.

Appendix 2: Sample Analysis

The producer must comply with criteria set out in this document, including specifications and pollutant limits specified below for the input (ground/milled and dried waste wood) and output material ('Class B' graded wood briquette) at the time it is produced:

Parameter	Unit	Specifications & Pollutant limits specified in EN17225-3 <small>Note 2 & Note 3</small>
Moisture	w-% as received	≤15
Ash	w-%dry	≤3
Particle density	g/cm ³ as received	≥0.9
Additives <small>Note 1</small>	w-% as received	≤2
Net Calorific Value	MJ/kg or kWh/kg as received	≥14.9 or ≥4.5
Nitrogen	w-%dry	≤1
Sulphur	w-%dry	≤0.05
Chlorine	w-%dry	≤0.03
Arsenic	Mg/kg/dry	≤1
Cadmium	Mg/kg/dry	≤0.5
Chromium	Mg/kg/dry	≤10
Copper	Mg/kg/dry	≤10
Lead	Mg/kg/dry	≤10
Mercury	Mg/kg/dry	≤0.10
Nickel	Mg/kg/dry	≤10
Zinc	Mg/kg/dry	≤100
Bromine	Mg/kg/dry	100
Fluorine	Mg/kg/dry	100
Physical contamination	w-%dry	0.5%
	Particle size	1 mm in any dimension

Note 1: Type of additives to aid production, delivery or combustion (e.g. pressing aids, slagging inhibitors or any other additives like starch, corn flour, potato flour, vegetable oil, lignin).

Note 2: Should any of the pollutant limits under *IS EN 17225-3* be amended, including the addition of any pollutants, the most recent version of the pollutant limits shall be complied with. It is the responsibility of the producer and users to ensure that the most up to date version of the technical standard is being considered.

Note 3: The specification for physical contaminants and the pollutant limits for bromine and fluorine are not specified in *IS EN 17225-3*.