

END-OF-WASTE CRITERIA FOR RECOVERED CALCIUM FLUORIDE ADDITIVE

Single Case Decision for John Gannon Concrete Limited (t/a Gannon ECO).

This document sets out end-of-waste criteria for
recovered calcium fluoride additive,
produced by John Gannon Concrete Limited (t/a Gannon ECO).

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Decision establishing End-of-Waste Criteria
under
Regulation 28 of the European Union (Waste Directive) Regulations 2011 - 2020
for
recovered calcium fluoride additive,
produced by John Gannon Concrete Limited (t/a Gannon ECO),
Split Hill Quarries,
Hazelwood,
Kilbeggan,
County Westmeath.

Decision Date: 14th September 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 Directive¹, 2008, as amended was transposed into Irish law by the European Union (Waste Directive) Regulations 2011-2020² (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. Regulation 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 calcium fluoride additive may be used as a secondary material without the need for waste regulation or control. The calcium fluoride additive will be sold to metal and cement manufactures who may use calcium fluoride additive as a flux agent and/or mineralizing agent in the production of metal and clinker/cement products.

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 calcium fluoride additive, those European criteria may supersede these criteria and the Agency may withdraw this decision.

These end-of-waste criteria are applicable in Ireland. End-of-waste compliant material can be placed on the export market where:

- approval has been attained from the destination country's relevant competent authority that this authority recognizes the recovered material as a non-waste *prior to* the material being placed on that market;
- The National Transfrontier Shipments Office has been contacted and confirmation has been attained that they recognize this approval from another jurisdiction *prior to* the material being placed on that market; and
- Record of the above approval(s) and confirmations are maintained and available for inspection at the Producer's facility.

¹ Waste Framework Directive - Directive 2008/98/EC on waste (WFD).

² Waste Directive Regulations - European Union (Waste Directive) Regulations 2011 – 2020.

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

- any critical data in the approved batch record for the finished product is found to be false and the finished product does not meet the required finished product specification;
- the finished product is discarded or there is an intention or requirement to discard, for example if it is disposed of or if the finished product has exceeded its labelled expiry date;
- it is stored for a period greater than may be specified in the end-of-waste criteria;
- it is mixed with other waste materials;
- the producer cannot provide documented evidence of compliance with these end-of-waste criteria;
- the producer cannot provide evidence that there is a sustained active market for the finished product;
- the producer cannot provide evidence the requirements of criterion 1 have been satisfied for the export market on which the finished produced has been placed; or
- if there is a requirement to recall the finished product from the market.

This decision document is for the purposes of Regulation 28 of the European Union (Waste Directive) Regulations 2011-2020 only and nothing in this document shall be construed as negating John Gannon Concrete Limited (t/a Gannon ECO) 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 calcium fluoride additive by John Gannon Concrete Limited (t/a Gannon ECO).

2 Decision

The Agency has decided, in accordance with Regulation 28(3) of the European Union (Waste Directive) Regulations 2011 - 2020, that the calcium fluoride additive (as defined in Appendix 1) the subject of the application made by John Gannon Concrete Limited (t/a Gannon ECO) on the 8th November 2019, and produced at an appropriately authorised waste facility operated by John Gannon Concrete Limited (t/a Gannon ECO), 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;
- the fact that the recovered material will serve a useful purpose in replacing a portion of the market that utilizes the critically listed primary raw material;
- the fact that the recovered material will be required to meet the customer's finished product specification in order to fulfil the same function as the primary raw material;

- the fact that the recovered material will have an associated REACH³ registration and is required to meet all current product requirements prior to placing the material on the market;
- 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 calcium fluoride additive conforms with the requirements of Regulation 28(1)(a) & Regulation 28(2) of the Regulations and its use as a fluxing and/or mineralizing agent in the production of metal and cement will not lead to overall adverse environmental and human health impacts, if used in a regulated production environment the outputs of which meet the requirements of the relevant product legislation.

3 Criteria for Materials Handling & Control

3.1 Waste inputs

- 3.1.1 Inputs shall only be accepted from the supplier described in the End-of-Waste application submitted to the Agency on the 8th November 2019.
- 3.1.2 Inputs shall be restricted to waste calcium fluoride containing sludges and filter cake as per the List of Waste Code:
 - 11 01 10 - sludges and filter cakes not containing dangerous substances, which meet the Incoming Waste Acceptance Criteria described in the End-of-Waste application submitted to the Agency on the 8th November 2019.
- 3.1.3 Each lot of waste input shall be assigned a unique identifier.
- 3.1.4 Hazardous waste shall not be used as an input.
- 3.1.5 Where non-conforming waste is delivered, it shall be immediately moved to a designated quarantine area and stored pending consignment to the supplier or an appropriately authorised waste management facility.

3.2 Recovery process

- 3.2.1 The recovery processes (drying, pelletising as required and bagging) shall be completed in accordance with waste regulatory requirements, including requirements relating to compliance with the waste authorisation for the facility in which the calcium fluoride additive is produced.

3.3 Quality of calcium fluoride additive

- 3.3.1 The calcium fluoride additive shall comply with the relevant product technical standard(s), legislative requirements and customer specifications for supply, sale and direct use as metallurgical and/or cement grade material.

³ Registration, Evaluation, Authorisation and Restriction of Chemicals - Regulation 1907/2006/EC (REACH).

3.3.2 Each batch of the calcium fluoride additive shall be assigned a unique identifier. The recovered calcium fluoride additive shall be tested, in an accredited laboratory, using an accredited test method (where available), and comply with the criteria set out in Appendix 2.

3.3.3 The recovered calcium fluoride additive shall:

- i. comply with relevant provisions of the Classification, Labelling and Packaging (CLP)⁴ Regulation;
- ii. comply with relevant provisions of the REACH Regulation; and
- iii. comply, as required, with relevant provisions of the Construction Product Regulation (CPR)⁵.

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

3.3.4 The calcium fluoride additive shall not be stored for a period greater than 12 months or, due to its hygroscopic nature, any other period which causes the material to exceed the thresholds in the finished product specification. Products that exceed the time limit for storage or exceed the thresholds of the finished product specification in storage shall be deemed to be waste.

3.4 Quality Management System

3.4.1 The applicant shall maintain and implement a quality management system to demonstrate compliance with the end-of-waste criteria.

3.4.2 The quality management system shall be certified to an approved ISO standard.

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

John Gannon Concrete Limited (t/a Gannon ECO) shall demonstrate compliance with the requirements of this decision and if unable to do so the recovered calcium fluoride additive 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 recovered calcium fluoride additive shall be maintained:

⁴ Classification, Labelling and Packaging - Regulation (EC) No 1272/2008 (CLP).

⁵ Construction Products Regulation – Regulation (EU) No. 305/2011 (CPR).

4.1.1 The quality management system, set out in Criterion 3.4, shall include a set of documented procedures concerning each of the following aspects:

- i. Sampling and analysis of the input waste 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 (calcium fluoride additive) 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 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 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 calcium fluoride additive.

4.1.2 Training records shall be maintained which 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.

4.1.3 In order to demonstrate that the recovered calcium fluoride additive 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 the laboratory;

- vi. independent audit reports demonstrating the outcome of any independent audit of the calcium fluoride additive 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.

4.1.4 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 should 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.

4.1.5 A 'statement of conformity' shall be completed for each consignment of recovered calcium fluoride additive leaving the facility. The declaration of conformity shall;

- i. include the producers of the calcium fluoride additives 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 ART28-0041);
- iv. state that the producer of the calcium fluoride additive applies a management system complying with the requirements of this decision (End-of-waste Decision ART28-0041), and which has been verified by an accredited conformity assessment body or by an environmental verifier or, where calcium fluoride additive 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 Construction Products Regulation (where applicable);
- vi. state the relevant provisions of the appropriate finished product standard(s) and customer specifications to which the recovered calcium fluoride additive has been complied with. Details of the name of the specific 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 recovered calcium fluoride additive leaving the facility;
- xiii. be accompanied by or contain a link to an electronic copy of the safety data sheet for the recovered calcium fluoride additive; and

xiv. be signed and dated by the producer of the calcium fluoride additive certifying that the above information is complete and correct.

- 4.1.6 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.
- 4.1.7 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, REACH Regulation and Construction Products Regulations (as required). The producer shall ensure these matters are addressed in customer supply contracts.
- 4.1.8 All records including controls, inspections and training shall be maintained for a minimum of 5 years.
- 4.1.9 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.
- 4.1.10 The producer shall, upon request, provide competent authorities including the Agency, relevant local authorities, the Health and Safety Authority (HSA), the National Transfrontier Shipments of Waste Office, Market Surveillance Authority and the Competent National Authority access to the quality management system, including the end-of-waste application⁶ and statement of conformity.

5 Criteria on Use and Restrictions on Use

Users of calcium fluoride additive 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:

- The calcium fluoride additive is to be used as a metallurgical grade or cement grade fluxing agent and or mineralizing agent in the production of metal or cement only, where the emissions from the production process utilizing the agent are appropriately authorised and regulated by a competent authority; and
- The calcium fluoride additive is limited to sale and use in the Republic of Ireland and in any other destination country where approval has been attained from the country's relevant competent authority that the recovered material is recognised by the competent authority in that jurisdiction as a non-waste prior to the material being placed on that market.

⁶ The end-of-waste application submitted to the Agency on the 8th November 2019.

These criteria do not affect the obligation of the producer 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	John Gannon Concrete Limited (t/a Gannon ECO) of Split Hill Quarries, Hazelwood, Kilbeggan, County 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.
Calcium fluoride additive	Recovered calcium fluoride additive that meets these end-of-waste criteria.
CLP Regulation	Classification, Labelling and Packaging: 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 calcium fluoride additive that leaves the facility.
CPR	Construction Products Regulations - Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.
Hazardous waste	As defined in the Waste Management Act 1996, as amended.
ISO Standard	Standards published by the International Organisation for Standardisation.
Non-conforming product	A product that does not meet the requirements of the product technical standard(s) or legislative requirements as appropriate.
Producer	John Gannon Concrete Limited (t/a Gannon ECO) of Split Hill Quarries, Hazelwood, Kilbeggan, County Westmeath.
REACH Regulation	Regulation (EC) No. 1907/2006/EC 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	Calcium fluoride additive that meets 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 calcium fluoride additive conforms to end-of-waste criteria, product standards and specifications, it includes details of restrictions on use of the calcium fluoride additive.
User	User means supply companies, contractors and all those organisations or individuals responsible for the end use of the calcium fluoride additive.
Waste	As defined in the Waste Management Act 1996, as amended.

Appendix 2: Criteria for Sample Analysis

The producer must comply with criteria set out in this document, including specifications and pollutant limits specified below, for the output material (calcium fluoride additive) at the time it is produced.

The testing of the output material will cover the testing of the input material as the recovery process does not change the chemical constituents of the input material.

Should any of the specifications as registered under REACH be amended or replaced, the most recent version of the specification shall be complied with. It is the responsibility of the Producer and users to ensure that the most up to date version is being considered.

Finished Product Specification – Physical and Performance Testing:

Parameter	Specification	Unit
Particle size range	0-60	mm
Bulk density	1600-1850	Kg/m ³
Calcium fluoride content	40 (minimum)	%
Moisture content ^{Note 1}	2 (maximum)	%
Calcium carbonate content ^{Note 1}	10 (maximum)	%
Silica content ^{Note 1}	9 (maximum)	%
P2O5 content ^{Note 1}	0.08 (maximum)	%

Note 1: This parameter applies to calcium fluoride additive intended for use as steel flux only.

Note 2: The analysis method for each parameter is user defined.

Finished Product Specification – Chemical Testing:

Parameter	Analysis Method	Pollutant limit	Unit
Antimony	EN 13650	25	mg/kg
Arsenic	EN 13650	10	mg/kg
Barium	EN 13650	70	mg/kg
Beryllium	EN 13650	1	mg/kg
Cadmium	EN 13650	1.5	mg/kg
Chromium	EN 13650	20	mg/kg
Copper	EN 13650	40	mg/kg
Lead	EN 13650	150	mg/kg
Molybdenum	EN 13650	4	mg/kg
Mercury	EN 13650	0.1	mg/kg
Nickel	EN 13650	20	mg/kg
Zinc	EN 13650	20	mg/kg
Total Sulphur	User defined.	1	%