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BSI Standards Publication

Fertilizing products - Stability of chelating and complexing agents

bsi.

National foreword

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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Fertilisants - Stabilité des agents chélatants et complexants

Düngeprodukte - Stabilität von Chelat- und Komplexbildnern

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European foreword

This document (CEN/TS 17787:2022) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials” the secretariat of which is held by DIN.

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Introduction

Regulation (EU) 2019/1009 [1] lays down the rules on the making available on the market of EU fertilizing products and the specific safety and quality requirements for the defined product function categories (PFCs).

Inorganic fertilizers have been classified into PFC 1(C), which has been divided into two groups PFC 1(C)(I) [inorganic macronutrients fertilizers] and PFC 1(C)(II) [inorganic micronutrient fertilizers].

Micronutrients are considered to be, in plant nutrition, a number of elements known to be needed in small amounts for proper plant growth and development. The most common are Iron (Fe), Manganese (Mn), Molybdenum (Mo), Copper (Cu), Zinc (Zn) and Boron (B).

If an inorganic micronutrient fertilizer contains a substance, or one of the substances in the mixture, which is intended to enhance the long term availability to plants of micronutrients in the EU fertilizing product, that substance is either a chelating agent or a complexing agent. Chelating and complexing agents should fulfil the requirements of component material category (CMC) 1 according to Regulation [EU] 2019/1009 [1].

The stability requirements for CMC 1 as specified in Regulation (EU) 2019/1009 [1] are defined in this document as well as the normative references of the test methods to be used in order to measure the compliance with the related requirement in the Regulation (EU) 2019/1009 [1].

1 Scope

This document specifies the references to the methods for the determination of stability of chelating and complexing agents for CMC 1 as specified in the Regulation (EU) 2019/1009. The document specifies references to the methods and requirements for inorganic micronutrient fertilizers in accordance with PFC 1(C)(II) as specified in the Regulation (EU) 2019/1009 [1].

Inorganic micronutrient materials for this purpose are micronutrient chelates or complexes and mixtures of them, in powder or granular form, aqueous or suspension preparations.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1482-1:2007, *Fertilizers and liming materials — Sampling and sample preparation — Part 1: Sampling*

EN 1482-2:2007, *Fertilizers and liming materials — Sampling and sample preparation — Part 2: Sample preparation*

EN 12944-1:1999[1], *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

EN 12944-2:1999[2], *Fertilizers and liming materials — Vocabulary — Part 2: Terms relating to fertilizers*

CEN/TS 17782:2022, *Fertilizing products — Determination of the stability of fertilizing products containing micronutrient chelates at different pHs*

CEN/TS 17783:2022, *Fertilizing products — Determination of the stability of fertilizing products containing micronutrient complexes*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12944-1:1999 and EN 12944-2:1999 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

4 Sampling and sample preparation

4.1 Sampling

Samples taken for quality control purposes shall be representative, as described in EN 1482-1:2007.

4.2 Sample preparation

Sample preparation for quality control purposes shall be in accordance with EN 1482-2:2007.

[1] As impacted by EN 12944-1:1999/AC:2000.
[2] As impacted by EN 12944-2:1999/AC:2000.