

<b>STN</b>	<b>Prípravky na vápnenie Stanovenie fyzikálnych a chemických vlastností a špecifických kontaminantov</b>	<b>STN EN 17816</b>  65 4907
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Liming materials - Determination of physical and chemical properties and specific contaminants

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

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## Liming materials - Determination of physical and chemical properties and specific contaminants

Amendements minéraux basiques - Détermination des propriétés physiques et chimiques et des contaminants spécifiques

Kalkdünger - Bestimmung physikalischer und chemischer Eigenschaften und spezifischer Kontaminanten

This European Standard was approved by CEN on 27 February 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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**EN 17816:2023 (E)**

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## **European foreword**

This document (EN 17816:2023) has been prepared by Technical Committee CEN/TC 260 “Fertilizers and liming materials” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

**EN 17816:2023 (E)****Introduction**

Regulation (EU) 2019/1009 [3] lays down the rules on the making available on the market of EU fertilizing products and the specific safety, quality and labelling requirements for the defined product function categories (PFCs). Liming materials have been classified as PFC 2.

In this document the normative references of the test methods to be used for liming materials (PFC 2) are defined in order to measure the compliance with the related requirement in Regulation (EU) 2019/1009 [3].

Supplementary denominations and specifications widely used in Europe are given in EN 14069 [2].

## 1 Scope

This document is applicable to liming materials, which contain oxides, hydroxides, carbonates or silicates of the nutrients calcium (Ca) or magnesium (Mg) and the function of which is to correct soil acidity. It is applicable to fertilizing products, which are classified as PFC 2 or the PFC 2 component in PFC 7 of Regulation (EU) 2019/1009 [3].

NOTE The methods referred to in this document have not been tested for fertilizing product blends (PFC 7) [3].

This document specifies references to the methods for the determination of the following physical and chemical properties and specific contaminants in liming materials:

- Determination of the cadmium content;
- Determination of the chromium VI content;
- Determination of the mercury content;
- Determination of the nickel content;
- Determination of the lead content;
- Determination of the arsenic content;
- Determination of the total chromium content;
- Determination of neutralizing value;
- Determination of the reactivity;
- Determination of the grain size/granulometry;
- Determination of the total CaO content;
- Determination of the total MgO content.

This document does not specify references to the methods for the determination of the following physical and chemical properties and specific contaminants in liming materials, as they are covered in other European Standards:

- Determination of the copper and zinc content;
- Determination of the chloride content;
- Determination of quantity (indicated by mass or volume);
- Determination of the phosphonates content.

**EN 17816:2023 (E)****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 1482-3:2016, *Fertilizers and liming materials — Sampling and sample preparation — Part 3: Sampling of static heaps*

EN 12944-1:1999<sup>1</sup>, *Fertilizers and liming materials — Vocabulary — Part 1: General terms*

EN 12944-3:2019, *Fertilizers and liming materials — Vocabulary — Part 3: Terms relating to liming materials*

EN 12945:2014+A1:2016, *Liming materials — Determination of neutralizing value — Titrimetric methods*

EN 12946:2000<sup>2</sup>, *Liming materials — Determination of calcium content and magnesium content — Complexometric method*

EN 12947:2000, *Liming materials — Determination of magnesium content — Atomic absorption spectrometric method*

EN 12948:2010, *Liming materials — Determination of size distribution by dry and wet sieving*

EN 13475:2001, *Liming materials — Determination of calcium content — Oxalate method*

EN 13971:2020, *Carbonate and silicate liming materials — Determination of reactivity — Potentiometric titration method with hydrochloric acid*

EN 14984:2016, *Liming materials — Determination of product effect on soil pH — Soil incubation method*

EN 16317:2013+A1:2017, *Fertilizers and liming materials — Determination of arsenic by inductively coupled plasma-atomic emission spectrometry (ICP-AES) after aqua regia dissolution*

EN 16318:2013+A1:2016, *Fertilizers and liming materials — Determination of chromium(VI) by photometry (method A) and by ion chromatography with spectrophotometric detection (method B)*

EN 16319:2013+A1:2015, *Fertilizers and liming materials — Determination of cadmium, chromium, lead and nickel by inductively coupled plasma-atomic emission spectrometry (ICP-AES) after aqua regia dissolution*

EN 16320:2013+A1:2017, *Fertilizers and liming materials — Determination of mercury by vapour generation (VG) after aqua regia dissolution*

EN 16357:2013, *Carbonate liming materials — Determination of reactivity — Automatic titration method with citric acid*

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<sup>1</sup> As impacted by EN 12944-1:1999/AC:2000.

<sup>2</sup> As impacted by EN 12946:2000/AC:2002.