SLOVENSKI STANDARD
SIST EN 13535:2002

01-november-2002

Trdna gnojila in sredstva za apnjenje - Razvrġ ļ anje

Fertilizers and liming materials - Classification

Düngemittel und Calcium-/Magnesium-Bodenverbesserungsmittel - Einteilung

Engrais et amendements minéraux basiques - Classification

Ta slovenski standard je istoveten z: **EN 13535:2001**

ICS:

65.080 Gnojila Fertilizers

SIST EN 13535:2002 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13535

March 2001

ICS 65.080

English version

Fertilizers and liming materials - Classification

Engrais et amendements calciques et/ou magnésiens - Classification

Düngemittel und Calcium-/Magnesium-Bodenverbesserungsmittel - Einteilung

This European Standard was approved by CEN on 20 January 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 13535:2001 E

Foreword

This European Standard 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of an identical text or by endorsement, at the latest by September 2001, and conflicting national standards shall be withdrawn at the latest by September 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The classification scheme includes an explanation of the meaning of each heading and clearly assigns each fertilizer or liming material to an appropriate group whilst recognizing that a few fertilizers or liming materials may be classified differently in some countries.

The limits for nutrient contents which determine each class can be subject to national legislation.

Owing to historical and legislative differences between countries, this European Standard uses, in the descriptions, terms only and not chemical symbols to denote nutrients. This avoids ambiguity between the elemental or oxide forms and leaves each country free to declare nutrient contents according to national requirements.

The descriptions given in clause 4 are not definitions but are given to explain the definitions to be found in EN 12944. These descriptions may not necessarily correspond with those used in national legislation.

1 Scope

This European Standard establishes a classification scheme for fertilizers and liming materials.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 12944 (all parts), *Fertilizers and liming materials - Vocabulary.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 12944 apply.

4 Classification

NOTE The classification scheme is shown in figure 1.

4.1 Inorganic fertilizers and liming materials

4.1.1 Inorganic fertilizers : Fertilizers added to the soil especially for the nutrition of plants and in which the declared nutrients are in the form of inorganic salts obtained by extraction and/or by physical and/or chemical industrial processes.

NOTE Calcium cyanamide, urea and its condensation and association products and bone superphosphate may, by convention, be classed as inorganic fertilizers.

4.1.1.1 N, P, K fertilizers

4.1.1.1.1 Straight N, P, K fertilizers

4.1.1.1.1.1 Straight nitrogenous fertilizers (N) : Fertilizers which have a declarable nitrogen content and which may contain other elements, but which do not have declarable phosphorus and/or potassium contents.

4.1.1.1.1.2 Straight phosphatic fertilizers (P) : Fertilizers which have a declarable phosphorus content and which may contain other elements, but which do not have declarable nitrogen and/or potassium contents.

4.1.1.1.1.3 Straight potassic fertilizers (K) : Fertilizers which have a declarable potassium content and which may contain other elements, but which do not have declarable nitrogen and/or phosphorus contents.

4.1.1.1.2 Compound N, P, K fertilizers

4.1.1.1.2.1 NP compound fertilizers : Fertilizers which have declarable nitrogen and phosphorus contents and which may contain other elements, but which do not have a declarable potassium content.

4.1.1.1.2.2 NK compound fertilizers : Fertilizers which have declarable nitrogen and potassium contents and which may contain other elements, but which do not have a declarable phosphorus content.

4.1.1.1.2.3 PK compound fertilizers : Fertilizers which have declarable phosphorus and potassium contents and which may contain other elements, but which do not have a declarable nitrogen content.

4.1.1.1.2.4 NPK compound fertilizers : Fertilizers which have declarable nitrogen, phosphorus and potassium contents and which may contain other elements.

4.1.1.2 Ca, Mg, Na, S fertilizers: Fertilizers which contain one or more of the elements calcium, magnesium, sodium and sulfur and which do not have declarable nitrogen, phosphorus or potassium contents and are, therefore, not classified as straight or compound N, P, K fertilizers.

NOTE These products differ from Ca, Mg liming materials in that their principal function is the nutrition of plants.

4.1.1.3 Micro-nutrient fertilizers : Fertilizers which have declarable contents of one or more micro-nutrients, but which do not have declarable nitrogen, phosphorus, potassium, calcium, magnesium or sodium contents.

4.1.2 Inorganic liming materials

4.1.2.1 General description

Inorganic soil improvers containing one or both of the elements calcium and magnesium, generally in the form of the oxide, hydroxide, carbonate or silicate, intended principally to maintain or raise the pH of the soil or water.

NOTE 1 They do not have declarable nitrogen, phosphorus or potassium contents.

NOTE 2 With respect to liming materials, in France, the expression "amendement minéral basique" is now preferred to "amendement calcique et/ou magnésien (liming product)" in the meaning of a product having an effect on the pH of the soil.

4.1.2.2 Liming materials of natural origin

4.1.2.2.1 Ca, Mg carbonates (limestone, dolomite, chalk): Inorganic liming materials containing one or both of the elements calcium and magnesium, in the form of carbonate, intended principally to maintain or raise the pH of the soil or water.

4.1.2.2.2 Ca, Mg oxides and hydroxides : Inorganic liming materials containing one or both of the elements calcium and magnesium, in the form of oxide and/or hydroxide, intended principally to maintain or raise the pH of the soil or water.

4.1.2.3 Other liming materials

4.1.2.3.1 Industrial products containing Ca, Mg carbonates, oxides and hydroxides : Inorganic liming materials containing one or both of the elements calcium and magnesium, generally in the form of oxides, hydroxides or carbonates, obtained as products from industrial processes, intended principally to maintain or raise the pH of the soil or water.

4.1.2.3.2 Industrial products containing Ca, Mg silicates : Inorganic liming materials containing one or both of the elements calcium and magnesium, generally in the form of silicates, obtained as products from industrial processes such as blast furnaces and converters, intended principally to maintain or raise the pH of the soil or water.

4.1.2.3.3 Other inorganic liming materials : Inorganic compounds with liming properties such as ashes and soda, or mixtures of products classified under 4.1.2.2.1, 4.1.2.2.2, 4.1.2.3.1 and 4.1.2.3.2, intended principally to maintain or raise the pH of the soil or water.

4.2 Organic fertilizers

4.2.1 General description

Carbonaceous materials added to the soil specifically for the nutrition of plants, and having a declarable content of nitrogen and/or phosphorus and/or potassium of vegetable and/or animal origin.

4.2.2 Organic nitrogenous fertilizers : Materials of vegetable and/or animal origin in which the declarable nitrogen content is organically combined with carbon and which may contain other elements, but which do not have declarable phosphorus or potassium contents.

4.2.3 Synthetic organic nitrogenous fertilizers : Nitrogenous fertilizers in which the nitrogen is combined with carbon by industrial organic synthesis.

NOTE This category only exists in those countries in which urea condensates are not classified as inorganic fertilizers.

4.2.4 NP organic fertilizers : Organic fertilizers which have, in addition to nitrogen, a declarable content of phosphorus of vegetable and/or animal origin, and which may contain other elements, but which do not have a declarable potassium content.

NOTE 1 In some countries, bone meals are classified as semi-organic fertilizers.

NOTE 2 Synthetic NP organic fertilizers may be produced in some countries.

4.2.5 NK organic fertilizers : Organic fertilizers which have, in addition to nitrogen, a declarable content of potassium of vegetable and/or animal origin, and which may contain other elements, but which do not have a declarable phosphorus content.

NOTE Synthetic NK organic fertilizers may be produced in some countries.

4.2.6 NPK organic fertilizers : Organic fertilizers which have, in addition to nitrogen, declarable contents of phosphorus and potassium of vegetable and/or animal origin, and which may contain other elements.

4.2.7 NP, NK, NPK fertilizers containing synthetic organic nitrogen : NP, NK or NPK compound fertilizers containing declarable amounts of synthetic organic nitrogen.

4.3 Fertilizers of mixed origin

4.3.1 Organo-mineral fertilizers : Products in which the declarable nutrients are of both organic and inorganic origin, obtained by mixing and/or chemical combination of organic fertilizers and inorganic fertilizers.

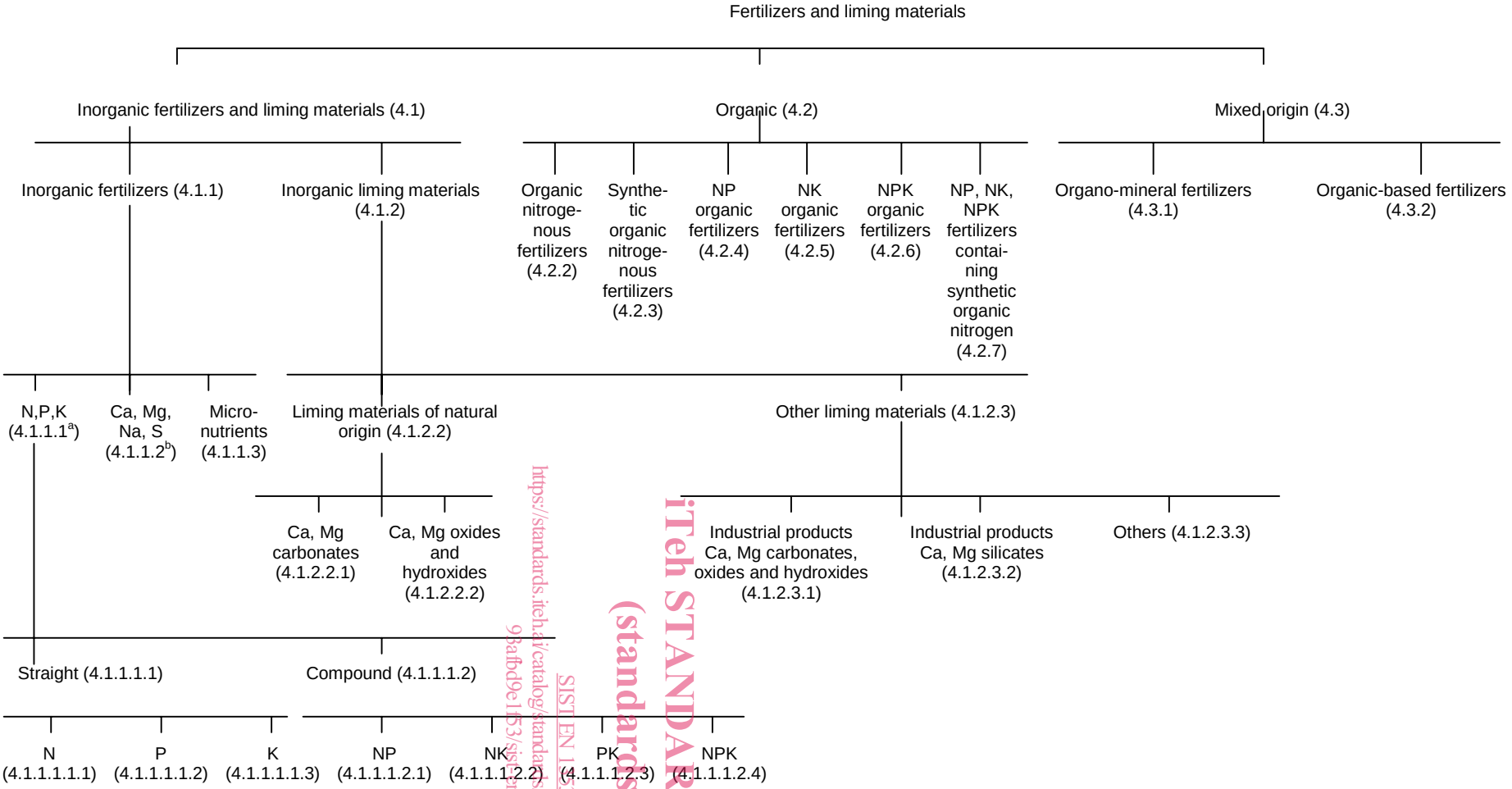
NOTE 1 The term “semi-organic fertilizer” is used in some countries for these products.

NOTE 2 In some countries in which urea condensates are not classified as inorganic fertilizers, the term “organo-mineral fertilizer” is reserved for those products which contain nitrogen of vegetable and/or animal origin only.

4.3.2 Organic-based fertilizers : Products in which the declarable nutrients are of inorganic origin but which are mixed with organic materials such as peat or lignite.

NOTE 1 In some countries, peat-based products are classified as semi-organic fertilizers.

NOTE 2 In some countries, organic materials in which fertilizer has been incorporated can equally be classified as organic soil improvers containing fertilizer.



[a] The products classified under 4.1.1.1 can contain the secondary nutrients calcium, magnesium, sodium, sulfur and micro-nutrients. In so far as national regulations permit, the classification of these products is not qualified, but their denomination is followed by “with …” or “with added …”.

[b] The products classified under 4.1.1.2 can contain micro-nutrients. In so far as national regulations permit, the classification of these products is not qualified, but their denomination is followed by “with …” or “with added …”.

Figure 1 — Classification scheme for fertilizers and liming materials