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Soil improvers and growing media — Labelling, specifications and product schedules

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National foreword

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— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the CR title page, pages 2 to 44 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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English version

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Bodenverbesserungsmittel und Kultursubstrate — Kennzeichnung, Anforderungen und Produktlisten

This CEN Report was approved by CEN on 17 March 1999. It has been drawn up by the Technical Committee CEN/TC 223.

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CEN

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Foreword

This CEN Report is published by the European Committee for Standardization. It has been prepared by CEN/TC 223/WG 1 and contains the text of prEN 12577 and prEN 12578, merged, and revised in accordance with decisions taken during the Public Enquiry. It is published for information only and does not have the status of a European Standard. The subsequent text in this CEN Report, starting with the Introduction, is in the style of a European Standard but it is for information only.

Contents

Introduction

The requirements in this CEN Report are limited to some chemical and physical parameters for which analytical methods are already described in available drafted documents (drafts of prEN's). The committee which is responsible for the CEN Report is aware of the need for further details concerning nutrient contents, the suitability or otherwise for organic farming (e.g. sewage sludge, mineral fertilizer, pesticide residues etc.) and for the assessment of harmful effects caused by unavoidable pollutants.

The preparation of suitable analytical methods is on the way. They will be published as soon as possible. An extended version of this CEN Report will be drafted when the analytical methods are available.

Introductory note to CEN Report (PrEN 12577 & PrEN 1278)

In October 1996 prEN 12577 *Soil improvers and growing media — Labelling* and prEN 12578 *Soil improvers and growing media — Specifications — Product schedules* were submitted to Public Enquiry with the intention that they should be published as European Standards. However, Working Group 1 of CEN/TC 223 (which was responsible for prEN 12577 and prEN 12578) concluded at its second Comments Resolution Meeting (CRM) in September 1997 that the Technical Committee should stop work on these two work items and withdraw the studies with the establishment of a CEN Report (CEN/TC 223 N173).

The reasons for their decision were reported by the Convenor of the Working Group in CEN/TC 223 N173. Essentially the two items, prEN 12577 (Labelling) and prEN 12578 (Specifications — Products schedules), although not mandated had given rise to national conflicts as these areas are covered in several countries by legislation. Requests for A-deviations with accompanying text had been received by France and Germany during the Public Enquiry. Austria had not prepared any text for A-deviation, but had indicated their intention to have A-deviations to prEN 12577 and prEN 12578[1)]. During the plenary meeting of TC 223 in June 1997, Spain and the Netherlands indicated their intent to submit A-deviations if possible at this stage. The CRM Convenor reported that countries with legislation wanted full covering standards from the day of implementation, including all methods of analyses, and not a step by step procedure as presupposed in prEN 12578. The specifications and the obligatory and optional declarations which required measurement, had been limited to those parameters for which TC 223 prEN draft analytical methods were available. TC 223 had agreed that once further analytical methods were available the specifications and the obligatory and optional declarations would be extended (see Introduction). The CRM Convenor also reported that no country with legislation was, in the process of European Standardization, willing to, or able to, change any of the specifications laid down in their legislation (for example maximum limits of undesirable substances).

The CRM recommended that the best solution to continue harmonization of trade with soil improvers and growing media in Europe, was to stop the standardization on the two work items and to publish the revised prENs as a CEN Report. It recommended that the CEN Report be sent to the European Commission as the basis for further harmonization in this politically influenced area.

Another obstacle was the development of a system of specific product schedules. As the scope of prEN 12577 and prEN 12578 covered all soil improvers and growing media, the list of products had increased substantially. It became clear that a maintenance agency would need to be established in order to frequently revise the list and in effect provide a product registration system. This was not practical and it was not the intention of TC 223 to have such a system.

[1)] A-deviation text from Austria was produced at the TC 223 WG 1 meeting in April 1998 and it is appended to the CEN Report.

Results of a questionnaire prepared by the Working Group Convenor showed that all countries replying had supported the CEN Report decision.[2] The results also showed overwhelming support for the continued standardization of methods for sampling and analysis.

PrEN 12577 and prEN 12578, revised in accordance with the technical and editorial decisions taken on the Public Enquiry comments, were merged into one document as the two items were inextricably linked.

The unanimous TC 223 decision to produce a CEN Report is recorded in CEN/TC 223 Resolution 044/1998/00 taken by correspondence on 1998-04-18.

1 Scope

This CEN Report gives labelling and specification requirements for soil improvers, soil improver constituents, growing media and growing media constituents. Specifications for designated products are given in product schedules in Annex A.

This CEN Report does not apply to liming and other materials covered by CEN/TC 260.

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 CEN Report only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 12580, *Soil improvers and growing media — Determination of a quantity*[3].

EN 13037, *Soil improvers and growing media — Determination of pH value*[3].

EN 13038, *Soil improvers and growing media — Determination of electrical conductivity*[3].

EN 13039, *Soil improvers and growing media — Determination of organic matter content and ash*[3].

EN 13040, *Soil improvers and growing media — Sample preparation and determination of dry matter content, moisture content and laboratory compacted bulk density*[3].

EN 13041, *Soil improvers and growing media — Determination of physical properties — Dry bulk density, air volume, water volume, shrinkage value and total pore space*[3].

ISO 7409, *Fertilizers — Marking — Presentation and declarations.*

ISO 11260, *Soil quality — Determination of effective cation exchange capacity and base saturation level using barium chloride solution.*

ISO 11277, *Soil quality — Determination of particle size distribution in mineral soil material — method by sieving and sedimentation.*

3 Terms and definitions

For the purposes of this CEN Report the following terms and definitions apply:

3.1
soil improver constituent

material which is suitable as an ingredient of soil improver

3.2
soil improver

material added to soil in situ primarily to maintain or improve its physical properties, and which may improve its chemical and/or biological properties or activity

3.3
growing medium constituent

material which is suitable as an ingredient of growing media

3.4
growing medium

material, other than soils in situ, in which plants are grown

3.5
organic materials

materials of plant and animal origin

3.6
obligatory labelling

information which shall be shown on the package, label or on the accompanying documents stated in accordance with this report, inside the frame

3.7
optional labelling

information which may be shown on the package, label or on the accompanying documents stated in accordance with this report, inside the frame

[2] Spain changed their vote from objection to approval for the publication of a CEN Report, which gave unanimous approval from Members voting.

[3] In preparation

	EN YYY
Composted material: Soil improver/growing medium constituent	
Major constituents:	Park and garden waste Horse manure
Particle size distribution:	
Dry matter	x_7 %
Organic matter in dry matter:	x_1 %
Electrical conductivity:	x_2 U
pH	x
Quantity	x_8 U
Batch code:	
Recommended use:	No special requirements
Responsible person:	The Associated Composters Downstreet, Uptown, Noland

NOTE x_n and y_n are numbers and U is the chosen unit stated in the standard analytical method.

Figure 1 — Labelling example

3.8
voluntary labelling

additional information which may be shown on the package, label or on the accompanying documents stated in accordance with this report, outside of the frame

4 Requirements

4.1 General labelling requirements

4.1.1 The labelling shall be divided into three parts:

— Obligatory part in accordance with **4.2**;

— Optional part in accordance with **4.3**;

— Voluntary part in accordance with **4.4**.

4.1.2 The obligatory and optional labelling shall be given in a frame as shown in Figure 1, or, by an accompanying document. None of the labelling shall contain contradictory information. No voluntary labelling shall be placed inside the frame.

NOTE A country may require that products sold in its territory are labelled in its national language or languages.

4.1.3 The print size of the label shall be in accordance with ISO 7409.

4.2 Obligatory labelling requirements

Obligatory labelling shall include:

a) The number of this CEN Report.

b) Product designation in accordance with the product schedules in Annex A (see **4.5**);

c) Name and address of the responsible person;

d) Declarations:

1) Major [i.e. more than about 10 % (*V*/*V*)] constituents listed in descending order of proportion by volume. Exact percentages need not be declared.

2) Physical and chemical characteristics in accordance with the product schedules in Annex A (see **4.5**);

3) Quantity in pack/consignment, in accordance with the product schedules in Annex A (see **4.5**);

e) Safety labelling: To include any information, declaration or guideline necessary for the safe handling and use of the product;

NOTE 1 Guidelines can be found in CR 13455

f) Batch code.

NOTE 2 This may be given with reference to a term such as "See back of bag";

g) Recommended method of use/application, for example: The rate of use for specific applications. If there are no special requirements, a term such as "No special requirements for correct use" is acceptable.

NOTE 3 This may be given by reference to a statement elsewhere on the package, other than inside the label frame

4.3 Optional labelling requirements

Optional labelling shall include only the parameters or the information mentioned in this part of the standard (**4.3**) as follows:

a) Declarations: Physical and chemical characteristics in accordance with the appropriate product schedule in Annex A (see **4.5**);

b) Additives included in the product and their purpose;

c) Quality System Certification: Only European Standards, for example: one of the standards in the EN ISO 9000 series, shall be referred to;

d) Best before (date).

NOTE This may be given with reference to a term such as "See back of bag";

e) Recommended conditions for storage.

4.4 Voluntary labelling requirements

Voluntary labelling shall include parameters and information not included in **4.2** or **4.3** of this standard, and which are consistent with the following:

a) Shall not mislead the user, for example by attributing to the product properties that it does not possess or by suggesting that it possesses unique characteristics which similar products also have;

b) Shall relate to objective or quantifiable factors which are provable;

c) May refer to national standards and other marks of quality.

4.5 Product specific requirements

The product shall comply with the labelling and specification requirements as given in columns b), d) e) and f) of Table A.1 or Table A.2. Annex A contains a number of product schedules for soil improvers and growing media, listing

a) index number;

b) product designation;

c) description;

d) specifications;

e) obligatory declarations;

f) optional declarations.

The values of the physical and chemical characteristics included in the obligatory and optional labelling declarations and specification requirements for each product, shall be determined in accordance with the test method as specified in Table B.1 of this standard, see Annex B.

A full list of the physical and chemical characteristics in the order in which they shall be declared on the label is given in Table B.1 of this report, see Annex B.

NOTE This CEN Report does not specify tolerances for the declared values.

Annex A (normative)
Product schedules for soil improvers and growing media

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.1	Raised Bog Peat	Organic material obtained from raised bogs and mainly consisting of Sphagnum species	Organic matter in dry matter, > 90 % (m/m)	• Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC
1.2	Fen Peat	Organic material obtained from mires and mainly consisting of sedge, reed or swamp-forest peat, or mixtures hereof.	Organic matter in dry matter, > 45 % (m/m)	• Whether “sedge”, “reed”, “swamp-forest” (or mixture hereof) • Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC
1.3	Composted Green Material	Product obtained by thermophilic aerobic processing, including anaerobically pretreated organic matter such as green cut, garden and park waste and forest biomass.	Organic matter in dry matter, > 20 % (m/m)	• Major (i.e. more than about 10 % v/v) constituents by descending proportion • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry matter, %

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.4	Composted Bio Material	Product obtained by thermophilic aerobic processing, including anaerobically pretreated organic matter such as separately collected biogenic waste and aquatic biomass	Organic matter in dry matter, > 20 % (m/m)	• Major (i.e. more than about 10 % (v/v) constituents by descending proportion • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry matter, %
1.5	Composted Material with animal excreted matter including paunch contents	Product obtained by thermophilic aerobic processing, including anaerobically pretreated organic matter such as plant material, animal excretments and paunch contents	Organic matter in dry matter, > 20 % (m/m)	• Major constituents by descending proportion • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry matter, %
1.6	Spent Mushroom Compost	Product obtained as a residue of mushroom production, with or without cover soil	Organic matter in dry matter, > 20 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry matter, %
1.7	Bark	Bark from one or more type of tree or tree species	Organic matter in dry matter, > 40 % (m/m)	• Whether from “coniferous” or “deciduous” trees • If “aged”, state: “Aged minimum” (months or years) • • Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.8	Composted Bark	Composted bark from one or more types of tree or tree species	Organic matter in dry matter > 30 % (m/m)	• Whether from "coniferous" and/or "deciduous" trees • Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % Electrical conductivity, EC
1.9	Wood Fibre	Product obtained by fraying (rasping) of untreated wood	Organic matter in dry matter > 90 % (m/m)	• Whether from "coniferous" and/or "deciduous" trees • If "extracted": state extractant • Added colouring or brightening agents • Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC
1.10	Wood Chips	Wood chips produced by a mechanical process from untreated wood	Organic matter in dry matter > 90 % (m/m)	• Whether from "coniferous" and/or "deciduous" trees • Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC
1.11	Coir	Fibre and/or pith from coconut husks	Organic matter in dry matter > 90 % (m/m)	• Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC
1.12	Straw	Straw obtained by harvesting and cutting ripened crop residues	Organic matter in dry matter > 90 % (m/m)	• Name of plant species • Organic matter in dry matter, % • Quantity by volume	• Dry matter, %

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.13	Aquatic Plant Biomass	Product obtained from naturally occurring aquatic plants	Organic matter in dry matter > 80 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quality by volume	• Dry matter, %
1.14	Lignite	A naturally occurring organic material derived from compressed, decomposed plant matter	Organic matter in dry matter > 60 % (m/m)	• Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter, % • Electrical conductivity, EC
1.15	Sawdust	Product obtained as a residue of untreated wood from the timber industry		• Whether from “coniferous” and/or “deciduous” trees • Organic matter in dry matter, % • pH • Quantity by volume	• Electrical conductivity, EC • Dry matter, %
1.16	Conifer Needle Litter	Product obtained from coniferous forestry	Organic matter in dry matter > 70 % (m/m)	• Organic matter in dry matter, % • pH • Quantity	• Electrical conductivity, EC • Dry matter, %
1.17	Rice Hulls	Product obtained as a residue in the rice manufacturing industry and mainly consisting of rice paleae	Organic matter in dry matter > 70 % (m/m)	• Organic matter in dry matter, % • pH • Quantity by volume	• Electrical conductivity, EC • Dry matter, %
1.18	Jute Fibre	Product obtained from the jute industry	Organic matter in dry matter > 70 % (m/m)	• Organic matter in dry matter, % • pH • Quantity by volume	• Electrical conductivity, EC • Dry matter, %

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.19	Clay	Mineral material obtained from natural deposits.		• Particle size distribution by ISO 11277 • pH • EC • CEC by ISO 11260:1994 • Quantity by volume	•
1.20	Solid manure	Product consisting of the faeces and absorbed urine of farm animals — with or without bedding — that can be stacked.	Organic matter in dry matter > 55 %	• Name of animal specie(s) • Organic matter in dry matter • pH • EC • quantity by volume	• Dry bulk density • Dry matter %
1.21	Semi-liquid manure	Product consisting of a semi-liquid mixture of faeces and urine of farm animals — with or without bedding and with or without spilled drinking water, washing-down water and/or rainwater from livestock buildings — that can be pumped.	Organic matter in dry matter > 55 %	• Name of animal specie(s) • Organic matter in dry matter • pH • EC • quantity by volume	• Dry bulk density • Dry matter %
1.22	Pumice	Naturally expanded volcanic material		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter %
1.23	Broken Lava/Porous Volcanic Rock	Product obtained from naturally expanded volcanic material		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter %
1.24	Broken lava	Product obtained from naturally expanded volcanic material.		• EC • pH • Quantity by volume	• Dry bulk density

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.25	Composted plant material	Product obtained by thermophilic aerobic processing of organic matter made only with plant material like leaves, stems, barks etc.	Organic matter in dry matter > 45 % (m/m)	• Major constituents (> 10 %) by descending proportion • Organic matter in dry matter, % • pH • EC • Quantity by volume	• Dry matter, %
1.26	Spent coffee grounds	Product obtained from coffee seeds after toasting and extraction of soluble fraction	Organic matter in dry matter > 60 % (m/m)	• Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry matter, %
1.27	Sand	Mineral material obtained from natural deposits	Particle size distribution > 0,05 mm and < 2 mm	• Particle size distribution by ISO/FDIS 11277 • EC • pH • Quantity by volume	• Dry matter, %
1.28	Soil	Mineral particles of clay, silt and sand naturally occurring with or without organic matter		• textural class and particle size distribution by ISO/FDIS 11277 • Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry matter, %
1.29	Composted grape marc	Product obtained by pressing grapes after extraction of its juice, to make wine, which have been subjected to an aerobic composting process.	Organic matter in dry matter > 40 % (m/m)	• Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry matter, %

Table A.1 — Product schedules for soil improvers and soil improver constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
1.30	Anaerobically digested material	Product obtained by anaerobically digesting organic material such as plant material, which may include aquatic biomass, biogenic waste, bark, sewage sludge, wood waste and animal manure.	Organic matter in dry matter, > 20 % (m/m)	• Major constituents (> 10 % v/v) by descending proportion • Organic matter in dry matter • pH • Quantity by volume	• Dry matter %
1.31	Biosolids	Product obtained from sewage plants treating domestic and urban wastewaters and other sewage plants treating wastewaters of a composition similar to domestic and urban wastewaters	Organic matter in dry matter, > 40 % (m/m)	• type of industry if from an industrial wastewater treatment plant • Organic matter in dry matter, % • pH • Quantity by volume	• Dry matter % • EC
In the future new products will be developed that will be sold as, and perform the functions of, soil improvers. They shall be labelled in accordance with the principles and structure of this report					

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.1	Raised Bog Peat	Organic material obtained from raised bogs and mainly consisting of Sphagnum species	Organic matter in dry matter, > 90 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, % • Shrinkage value • Total pore space
2.2	Fen Peat	Organic material obtained from mires and mainly consisting of sedge, reed or swamp-forest peat, or mixtures hereof.	Organic matter in dry matter, > 45 % (m/m)	• Whether “sedge”, “reed”, “swamp-forest” (or mixture hereof) • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, % • Shrinkage value • Total pore space
2.3	Composted Green Material	Product obtained by mesoor thermophilic aerobically processing, including anaerobically pretreated organic matter such as green cut, garden and park waste and forest biomass	Organic matter in dry matter, > 20 % (m/m)	• Major (i.e. more than about 10 % (v/v) constituents by descending proportion • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Water volume • Air volume • Dry matter, % • Shrinkage value • Total pore space

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.4	Composted Bio Material	Product obtained by mesoor thermophilic aerobically processing, including anaerobically pretreated organic matter such as separately collected biogenic waste and aquatic biomass	Organic matter in dry matter, > 20 % (m/m)	• Major (i.e. more than about 10 % (v/v) constituents by descending proportion • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Water volume • Air volume • Dry matter, % • Shrinkage value • Total pore space
2.5	Composted Material with animal excreted matter including paunch contents	Product obtained by mesoor thermophilic aerobically processing, including anaerobically pretreated organic matter such as plant material, animal excretments and paunch contents	Organic matter in dry matter, > 20 % (m/m)	• Major (i.e. more than about 10 % (v/v) constituents by descending proportion • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Water volume • Air volume • Dry matter, % • Shrinkage value • Total pore space
2.6	Bark	Bark from one or more type of tree or tree species	Organic matter in dry matter, > 20 % (m/m)	• Whether from “coniferous” and/or “deciduous” trees • If “aged”, state: “Aged minimum” (months or years) • • Organic matter in dry matter, % • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, %
2.7	Composted Bark	Composted bark from one or more types of tree or tree species	Organic matter in dry matter > 30 % (m/m)	• Whether from “coniferous” and/or “deciduous” trees • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter • Shrinkage value • Total pore space

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.8	Wood Fibre	Product obtained by fraying (rasping) of untreated wood	Organic matter in dry matter > 90 % (m/m)	• Whether from "coniferous" and/or "deciduous" trees • If "extracted": state extractant • Added colouring or brightening agents • Organic matter in dry matter, % • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, % • Shrinkage value • Total pore space
2.9	Wood Chips	Wood chips produced by a mechanical process from untreated wood	Organic matter in dry matter > 90 % (m/m)	• Whether from "coniferous" and/or "deciduous" trees • Organic matter in dry matter, % • pH • Quantity by volume	• Dry bulk density • Dry matter, % • Air volume • Water volume
2.10	Coir	Fibre and/or pith from coconut husks	Organic matter in dry matter > 90 % (m/m)	• Whether granulated husks, "pith" and fibre or mixture of pith fibre • • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, % • Shrinkage value • Total pore space
2.11	Straw	Straw obtained by harvesting and cutting ripened crop residues	Organic matter in dry matter > 90 % (m/m)	• Name of plant species • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, %

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.12	Aquatic Plant Biomass	Product obtained from naturally occurring aquatic plants	Organic matter in dry matter > 80 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter • Air volume • Water volume
2.13	Polyurethane Foam Granules	Product obtained by polymerisation of two or polyfunctional hydroxy groups, containing compounds with di- or polyisocyanates, to a synthetic organic material, in granules		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.14	Polyurethane Foam (Rigid non-granular)	Product obtained by polymerisation of two or polyfunctional hydroxy groups, containing compounds with di- or polyisocyanates, to a synthetic organic material, non-granular		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Total pore space
2.15	Polyphenol Foam Granules	Product obtained by polymerisation of two or polyfunctional hydroxy groups, containing compounds with di- or polyphenols, to a synthetic organic material, in granules		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.16	Polyphenol Foam (Rigid non-granular)	Product obtained by polymerisation of two or polyfunctional hydroxy groups, containing compounds with di- or polyphenols, to a synthetic organic material, non-granular		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Total pore space
2.17	Mineral Wool Granules	Product obtained by spinning and granulation of mineral wool		• Whether made from “glass” or “stone” mass • Whether “water repellent” or “water absorbing” • Electrical conductivity • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.18	Mineral Wool (Rigid non-granular)	Product obtained by spinning of mineral wool		• Whether made from “glass” or “stone” mass • Whether “water repellent” or “water absorbing” • Electrical conductivity • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Total pore space
2.19	Exfoliated Vermiculite	Granular material manufactured from naturally occurring hydrated micaceous mineral, expanded/exfoliated by heat to form a laminar structure		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.20	Expanded Perlite	Granular material manufactured from naturally occurring hydrated volcanic rock, expanded by heat to form a cellular structure		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.21	Pumice	Naturally expanded volcanic material		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.22	Expanded Clay/Slate	Product obtained by heating up and expansion of clay particles		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.23	Broken Lava/Porous Volcanic Gravel	Product obtained by breaking naturally expanded volcanic material		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.24	Sand	Inert natural mineral particles		• Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.25	Lignite	A naturally occurring organic material derived from compressed, decomposed plant matter	Organic matter in dry matter > 60 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter, % • Air volume • Water volume • Shrinkage value • Total pore space

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.26	Sawdust	Product obtained as a residue of untreated wood from the timber industry		• Whether from "coniferous" or "deciduous" trees • Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry matter, % • Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space
2.27	Conifer Needle Litter	Product obtained from coniferous forestry	Organic matter in dry matter > 70 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter, % • Air volume • Water volume • Shrinkage value • Total pore space
2.28	Rice Hulls	Product obtained as a residue in the rice manufacturing industry and mainly consisting of rice paleae	Organic matter in dry matter > 70 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter, % • Air volume • Water volume • Shrinkage value • Total pore space
2.29	Jute Fibre	Product obtained from the jute industry	Organic matter in dry matter > 70 % (m/m)	• Organic matter in dry matter, % • Electrical conductivity, EC • pH • Quantity by volume	• Dry bulk density • Dry matter, % • Air volume • Water volume • Shrinkage value • Total pore space
2.30	Coal mine spoil	Mineral particles, mainly slates, coming from coal extraction, in its natural state or combusted at 1 100 °C, once ground and classified.		• Whether natural or combusted • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.31	Broken lava	Product obtained from naturally expanded volcanic material.		• Particle size max, mm • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume
2.32	Composted plant material	Product obtained by aerobically processing organic matter made only with plant materials like leaves, stems, barks, etc.	Organic matter in dry matter > 45 % (m/m)	• Major constituents (> 10 %) by descending proportion • Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space • Dry matter, %
2.33	Spent coffee grounds	Product obtained from coffee seeds after toasting and extraction of soluble fraction with has been subjected to an aerobic composting process.	Organic matter in dry matter > 60 % (m/m)	• Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space • Dry matter, %
2.34	Clay	Mineral material obtained from natural deposits.		• Particle size distribution by ISO 11277 • pH • EC • CEC by ISO 11260:1994 • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, %
2.35	Sand	Inert mineral particles	Particle size distribution > 0,05 mm and < 2 mm	• Particle size distribution by ISO 11277 • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.36	Soil	Mineral particles of clay, silt and sand naturally occurring with or without organic matter		• Textural class and particle size distribution by • ISO 11277 • Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Dry matter, %
2.37	Composted grape marc	Product obtained by pressing grapes after extraction of its juice, to make wine, which have been subjected to an aerobic composting process.	Organic matter in dry matter > 40 % (m/m)	• Organic matter in dry matter, % • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space • Dry matter, %
2.38	Blast furnace gravel	Product obtained as the coarse fraction from water cooling (granulated product) or air cooling (crystallized product) of cast slag originating from cast iron obtained in a blast furnace.		• Whether granulated or crystallized • EC • pH • Quantity by volume	• Dry bulk density • Air volume • Total pore space • Water volume
2.39	Anaerobically digested material	Product obtained by anaerobically digesting organic material such as plant material, which may include aquatic biomass, biogenic waste, bark, sewage sludge, wood waste and animal manure.	Organic matter in dry matter, > 20 % (m/m)	• Major constituents (> 10 % v/v) by descending proportion • Organic matter in dry matter • pH • Quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space • Dry matter %

Table A.2 — Product schedules for growing media and growing media constituents

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
2.40	Animal manure	Product obtained by stabilising and maturing the faeces and absorbed urine of farm animals — with or without bedding	Organic matter in dry matter > 35 %	• Name of animal specie(s) • Organic matter in dry matter • pH • EC • quantity by volume	• Dry bulk density • Air volume • Water volume • Shrinkage value • Total pore space • Dry matter %
Future products In the future new products will be developed that will be sold as, and perform the functions of, growing media. They shall be labelled in accordance with the principles and structure of this report					

Table A.3 — Product schedules for mixed growing media and soil improvers

a) Index no.	b) Product Designation	c) Description	d) Specifications	e) Obligatory Declarations	f) Optional Declarations
3.1	Mixed Soil Improver based on (major constituents by descending proportion	Product obtained by mixing two or more soil improver constituents listed in Table A.1, or other soil improver constituents		• Major (i.e. more than 10 % v/v) constituents by descending proportion. • As appropriate to the major constituents as described in Table A.1	• As appropriate to the major constituents as described in Table A.1
3.2	Mixed Growing Medium based on (major constituents by descending proportion	Product obtained by mixing two or more growing media constituents listed in Table A.2, or other growing media constituents		• Major (i.e. more than 10 % v/v) constituents by descending proportion. • As appropriate to the major constituents as described in Table A.2	• As appropriate to the major constituents as described in Table A.2

Annex B (normative)
Full list of physical and chemical characteristics for soil improvers/soil improver constituents and growing media/growing media constituents and the specified test methods[1)]

Table B.1

Physical/Chemical Characteristic (Parameter)[3)]	Soil Improver[2)]		Growing Medium[2)]		Test Method
	Obligatory declaration	Optional declaration	Obligatory declaration	Optional declaration	
1. Major constituents by descending proportions			x		
2. Whether sedge, reed, swamp forest or mixtures hereof	x		x		
3. Whether from coniferous or deciduous trees					
4. Whether made from glass or stone mass					
5. Whether granulated husks, pith and fibre or mixture of pith and fibre			x		
6. Whether water repellent or water absorbing					
7. If “aged”, state: Aged minimum months or years					
8. If “extracted”, state extractant	x		x		
9. Name of plant species.	x		x		
10. Added colouring or brightening agent	x		x		
11. Dry bulk density		x		x	EN 13041
12. Air volume		x		x	EN 13041
13. Water volume		x		x	EN 13041
14. Dry matter %		x		x	EN 13040
15. Organic matter in dry matter, % (*m*/*m*)	x[5)]		x[5)]		EN 13039
16. Electrical conductivity (EC)	x[4)]	x[4)]	x		EN 13038
17. pH	x		x		EN 13037
18. Quantity by volume	x		x		EN 12580
19. Shrinkage value				x	EN 13041
20. Total pore space				x	EN 13041

Notes:
[1)] Full labelling requirements are given in clause **4** of this report.
[2)] The specifications and declarations shall depend on the specific product — see product schedules
[3)] The physical/chemical characteristics are listed in the order in which they shall be declared on the label
[4)] An obligatory declaration or voluntary declaration depending on the specific product — see product schedules
[5)] Specification requirement — see product schedules

Annex C (informative)
Index

C.1 Soil improvers and soil improver constituents

NOTE Index to product schedules for soil improvers and soil improver constituents as given in Table A.1

Product designation	Index number
Anaerobically digested material	1.30
Aquatic plant biomass	1.13
Bark	1.7
Bark, composted	1.8
Biosolids	1.31
Broken Lava/Porous Volcanic Rock	1.23
Broken lava	1.24
Clay	1.19
Coir	1.
Composted bio material	1.4
Composted grape marc	1.29
Composted green material	1.3
Composted material	1.5
Composted plant material	1.25
Conifer needle litter	1.16
Jute	1.18
Lignite	1.14
Peat, fen	1.2
Peat, raised bog	1.1
Pumice	1.22
Rice hulls	1.17
Sand	1.27
Sawdust	1.15
Semi-liquid manure	1.21
Soil	1.28
Solid manure	1.20
Spent coffee grounds	1.26
Spent mushroom compost	1.6
Straw	1.12
Wood chips	1.10
Wood fibre	1.9

C.2 Growing media and growing medium constituents

NOTE Index to product schedules for growing media and growing media constituents as given in Table A.2

Product designation	Index number
Anaerobically digested material	2.39
Animal manure	2.40
Aquatic plant biomass	2.12
Bark	2.6
Bark, composted	2.7
Blast furnace gravel	2.38

Product designation	Index number
Broken lava	2.31
Clay	2.34
Coal mine spoil	2.30
Coir	2.10
Composted bio material	2.4
Composted grape marc	2.37
Composted green material	2.3
Composted material	2.5
Composted plant material	2.32
Conifer needle litter	2.27
Exfoliated vermiculite	2.19
Expanded clay	2.22
Expanded perlite	2.20
Jute fibre	2.29
Lava, broken	2.23
Lignite	2.25
Mineral wool, granules	2.17
Mineral wool, rigid	2.18
Peat, fen	2.2
Peat, raised bog	2.1
Polyphenol foam, granules	2.13
Polyphenol foam, granules	2.15
Polyphenol foam, rigid	2.16
Polyurethane foam, non-granules	2.14
Pumice	2.21
Rice hulls	2.28
Sand	2.24
Sand	2.35
Sawdust	2.26
Soil	2.36
Spent coffee grounds	2.33
Straw	2.11
Wood chips	2.9
Wood fibre	2.8

C.3 Mixed growing media

NOTE Index to product schedules for mixed growing media as given in Table A.3

Product designation	Index number
Mixed soil improver	3.1
Mixed growing medium	3.2

Bibliography

EN ISO 9000-1, *Quality management and quality assurance standards — Part 1: Guidelines for selection and use.* (ISO 9000-1:1994)

CR 13455, *Soil improvers and growing media — Guidelines for safety of users, the environment and plants.*

A-deviations received during the Public Enquiry on prEN 12577 and prEN 12578

JUSTIFICATION FOR THE GERMAN REQUEST FOR A A-DEVIATION FROM prEN 12577 "SOIL IMPROVERS AND GROWING MEDIA — LABELLING"

In recently revised national legislation on fertilizers most of the materials which are in the scope of CEN/TC 223 are classified as fertilizers. There are precise labelling settings in the German fertilizer legislation for those products which differ form prEN 12577 in essential items.

The relevant documents are "Düngemittelgesetz" vom 15.11.1977 (Bundesgesetzblatt Teil 1 vom 19 November 1977, S. 2134, zuletzt geändert durch Gesetz vom 27 September 1994 (BG BI I S. 2705) in der Fassung ab Oktober 1996) see enclosure (Low on fertilizer in the official version of October 1996) see Annex 1.

In particular we would draw attention on clause **2** a of paragraph 1, which gives a definition of the product group "Sekundärrohstoffdünger" (fertilizer from eg. food production residues or separately collected biogenic waste). These products represent the main part of the soil improvers collected biogenic waste). These products represent the main part of the soil improvers described in prEN 12578 for which prEN 12577 specifies the labelling requirements.

In the last revision of the law on fertilizers see Annex 2, page 4 (4) 1 a requirement is given that all materials with a nutrient content in dry matter of more than 0,5 % (m/m) nitrogen, 0,3 % (m/m) phosphate and 0,5 % (m/m) potassium oxide must be sold as fertilizers.

The labelling requirements for fertilizers according to the law on fertilizers is given in paragraph 3 (2).

a) Type designation

b) The nutrient contents and their solubility required for the specific fertilizer type

c) Particle size distribution; fineness of grind

d) Information about by constituents

e) Weight and volume

f) Information about the application, storage and handling

g) Information about the person who is responsible for the selling of the product.

EN 12577

Annex (informative)
A-type national deviation (french request)

A-deviation: National deviation due to regulations, the modification of which is currently not within the competence of the CEN/CENELEC member.

This standard does not form part of a European Directive. This A-deviation replaces the provisions of the European standard in the corresponding CEN/CENELEC countries until they are deleted.

In France, in application of the following regulatory texts on fertilizers soil improvers:

— law no. 79-595 relating to the inspection of fertilizers and soil improvers

— decree no. 80-478 of 16 June 1980 expressing the decision of the state authorities with regard to application of the law of 1 August 1905 on the repression of fraud in the matter of fertilizers or soil improvers.

— order of 9 June 1975 regarding the compulsory implementation of standard NF U 44-551 as far as specifications are concerned only.

— order of 27 December 1982 regarding the compulsory implementation of standard NF U 44-051 as far as the specifications are concerned only

— order of 29 August 1988 regarding the compulsory implementation of standard NF U 44-041

— order of 28 February 1989 regarding the compulsory implementation of standard NF U 44-071

labelling shall indicate the quantity expressed by weight.

To apply the above texts, the following changes are made:

3	Definitions
3.2	Growing media constituents: delete
3.6	Voluntary labelling: delete
4	Requirements
A	General requirements
4.1.1	Voluntary part: delete
B	Obligatory labelling

c.3) quantity in pack/consignment is expressed in weight

EN 12578

Annex (informative)
A-type national deviation (French request)

A-deviation: National deviation due to regulations, the modification of which is currently not within the competence of the CEN/CENELEC member.

This standard does not form part of a European Directive. This A-deviation replaces the provisions of the European standard in the corresponding CEN/CENELEC countries until they are deleted.

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— order of 27 December 1982 regarding the compulsory implementation of standard NF U 44-051

— order of 29 August 1988 regarding the compulsory implementation of standard NF U 44-041

— order of 28 February 1989 regarding the compulsory implementation of standard NF U 44-071

It is necessary to be able to provide proof that organic soil conditions and soil improvers:

— satisfy the innocuousness criteria cited in the following regulatory texts: law no. 79-595 of 13 July 1979,

— do not contain more than 3 % of N P_2O and K_2O, otherwise they shall also be considered as fertilizers in accordance with decree no. 80-478 of 16 June 1980.

Quantities shall be expressed by mass.

To apply the above texts, the following designations are deleted:

Index number		Product designation
1.2	peat	soil improver/growing medium constituent
1.3	composted material	soil/improver
1.4	composted material	growing medium constituent
1.5	spent mushroom compost	soil improver
1.7	bark	growing medium constituent
1.9	composted bark	growing medium constituent
1.11	wood fibre	growing medium constituent
1.13	wood chips	growing medium constituent
1.15	coir	growing medium constituent
1.17	straw	growing medium constituent
1.19	aquatic plant biomass	growing medium constituent
1.20	polyurethane foam granules	growing medium constituent
1.21	polyphenol foam granules	growing medium constituent
1.22	mineral wool granules	growing medium constituent
1.23	exfoliated vermiculite	growing medium constituent
1.24	expanded perlite	growing medium constituent
1.25	pumice	growing medium constituent
1.26	expanded clay	growing medium constituent
1.27	lignite	soil improver
1.28	lignite	growing medium constituent
1.29	sawdust	growing medium constituent
1.30	conifer needle litter	growing medium constituent
1.31	rice hulls	growing medium constituent
1.32	jute fibre	growing medium constituent
2.2	composted material	growing medium
2.6	polyurethane foam granules	growing medium
2.7	polyurethane foam (rigid, non-granular)	growing medium
2.8	polyphenol foam granules	growing medium
2.9	polyphenol foam (rigid, non-granular)	growing medium
2.18	mixed growing medium	growing medium

The following designations are added:

Type of product	Means of obtaining product and essential constituents	Water pH	Minimum MO %	By mass	MO/organic nitrogen	Total maximum N % by mass over dry matter
			over raw product	over dry product	maximum ratio	
Acid peat	Vegetable residue from developed and decomposed plants in a medium which is almost constantly saturated with water, and which possibly contains a certain amount of earthy matter.	< 5		80		4
Mushroom manure	Mixture consisting essentially of manure and tolerating at least 5 % of calcareous earth having been used to grow mushrooms.			40	35	3
Mushroom compost	Mixture of compost and earth having been used to grow mushrooms.			30	35	3
Non composted rape	Product consisting of pulp and skin and/or seeds and/or stalks.			70	50	3
Composted rape	Product consisting of pulp and skin and/or seeds and/or stalks having undergone non-alcoholic fermentation.	> 6,5		50	40	4
Non-fermented plant conditioner	Non-fermented but fermentable vegetable matter containing no waste of animal origin and only added inert matter with a total vegetable matter content exceeding 30 % peat.		50	60	50	3
Fermented plant conditioner	Vegetable matter having undergone fermentation and which contains no waste of animal origin other than manure and only added inert matter with a total vegetable matter content exceeding 30 % peat.		35	50	55	4
Manure	More or less fermented mixture of animal litter and excrement.			60	50	3

Type of product	Means of obtaining product and essential constituents	Water pH	Minimum MO %	By mass	MO/organic nitrogen	Total maximum N % by mass over dry matter
			over raw product	over dry product	maximum ratio	
Dehydrated manure	More or less fermented mixture of animal litter and excrement having undergone dehydration in order to reach a maximum level of 15 % moisture.			60	50	3
Artificial manure	Mixture of straw and nitrate fertilizers having undergone fermentation			70	60	3
Plant compost	Fermented mixture of matter of plant origin possibly containing waste of animal origin and/or mineral matter and/or inert with a total vegetable matter content not exceeding 30 % peat.		20	30	55	3
Fresh urban compost	Urban compost having undergone only 4 days fermentation maximum.		20			2
Semi-ripe urban compost	Urban compost having undergone fermentation subject to incomplete ripening.		20		60	2
Ripe urban compost	Urban compost having undergone fermentation subject to ripening.		20		50	2
Refuse	Product obtained by sieving previous household waste.			20	40	2
Peat compost	Fermented mixture consisting of more than 30 % peat, possibly containing waste of plant and/or animal origin and/or inert and/or mineral matter.		35	60		4

Growth media	pH (H_2O)	Organic matter minimum percentage of raw product by mass	Organic matter minimum percentage of dry matter by mass	Organic matter/organic nitrogen, Maximum ratio
Mould soil	—	10	15	40
"Heath" soil	Minimum 5.5	15	25	—
Peat bog soil		20	40	—
Peat medium	—	30	70	—
Non-fermented, non-supplemented vegetable feedstock	—	—	30	—
Fermented vegetable feedstock	—	30	70	—

The following designations are retained as far as the determination of the quantity by mass and not by volume is concerned:

1.1	peat	soil improver
1.6	bark	soil improver
1.8	composted bark	soil improver
1.10	wood fibre	soil improver
1.12	wood chips	soil improver
1.14	coir	soil improver
1.16	straw	soil improver
1.18	aquatic biomass	soil improver
2.1	peat	growing medium
2.3	composted bark	growing medium
2.4	wood fibre	growing medium
2.5	coir	growing medium
2.10	mineral wool granules	growing medium
2.11	mineral wool (rigid non-granular)	growing medium
2.12	exfoliated vermiculite	growing medium
2.13	expanded perlite	growing medium
2.14	pumice	growing medium
2.15	expanded day	growing medium
2.16	broken lava	growing medium
2.17	sand	growing medium

This standard applies to mixtures consisting of one of the above designated products and or one or several fertilizers, whose nitrogen (N) phosphoric anhydride (P_2O_5) potassium oxide (K_2O) content is less than 3 %.

For all types, it is obligatory to declare organic matter and total nitrogen as a percentage by mass of the raw product.

For ripe urban compost, it is obligatory to declare particle size distribution.

Only ripe urban compost, are divided into four types according to their particle size distribution

— very fine ripe urban compost at least 99 % of the compost shall pass through 6.3 mm square mesh size sieve.

— fine ripe urban compost least 99 % of the compost shall pass through a 12.5 mm square mesh size sieve.

— medium ripe urban compost at least 99 % of the compost shall pass through a 25 mm square mesh size sieve.

— big ripe urban compost at least 99 % of the compost shall pass through a 40 mm square mesh size sieve.

For ripe urban compost, it is obligatory to declare the absence or presence of sharp or cutting elements. It is obligatory for these to be passed through a round holed sieve (see NF E 81-061).

— 8 mm for medium and big ripe urban compost.

— 2 mm for fine and very fine ripe urban compost.

ARGUMENTS FOR THE REQUEST OF A-DEVIATION
CONFLICT ASPECTS BETWEEN prEN OF TC 223 — CEN IN RELATION WITH SPANISH LEGISLATION

In Spain there is no specific legislation on growing media nor soil improvers, but there are some regulations that affect some of the work by the TC 223 of CEN "Soil improvers and growing media".

Legislation regarding fertilizers and related

Real Decreto 72/1988 of 5 of February (BOE 6-2-88).

Orden of 18 of July of 1989 (BOE 25-7-89) on official method of sampling fertilizers.

Real Decreato 877/1991 of 31 May (BOE 12-6-91), that modifies the previous.

Orden of 14 of June of 1991 (BOE 19-6-91), that develops the previous and agrees with European norms.

Resolución de la Secretaria General de Producciones y Mercados Agrarios of 31 of July of 1991 (BOE 9-8-91), on registration of fertilizers.

Orden of 11 of July of 1994 (BOE 14-7-94) where Annexes I and II of the Order 14-6-91 are actualized.

Orden of 29 of May of 1997 (BOE 30-5-97) where Annexes I and V of the Order 14-6-91 are actualized.

This legislation refers to fertilizers, nutrient deficiency correctors and amendments. The concept of amendment conflicts with the concepts of "Soil Improver", "Growing Media Constituent", and "Growing Media" of TC 223 of CEN. The coincidence is specially important with regard to organic amendments, because Spanish legislation contains humic amendments, non-humic amendments, compost and peats. Many products that are included as "Soil Improvers", "Growing Media Constituent" and "Growing Media" in prEN of TC 223 of CEN are or can be considered as organic amendments.

This legislation on amendments establishes definitions and names of products, minimum contents, other requirements and quality criteria, labelling, sampling methods, etc.

The prEN 12577 (Labelling), 12578 (Specifications — Products Schedules) and 12579 (Sampling) of TC of CEN establish criteria and laboratory methods different from those of the Spanish legislation for organic amendments.

Legislation referring sewage sludges

Real Decreto 1310/1990 of 29 of October (BOE 1 November 1990), where use of sewage sludges in agriculture are regulated.

Orden of 26 of October of 1993 (BOE 5 November 1993), on use of sewage sludges in agriculture.

The prEN 12578 affects use of sewage sludges as an ingredient of "Composted Material" when used as "Soil Improver", "Growing Media Constituent", or "Growing Media" when they are subjected to aerobic composting.

This Spanish legislation establishes the maximum content of heavy metals of sewage sludges used in agriculture as well as the minimum parameters to be analyzed in them and sampling and analysis methods. This legislation is transposed from Counsel Directive 86/278/CEE of 12 of June of 1986.

PREN 12577 AND 12578
ARGUMENTS FOR THE REQUEST FOR A-DEVIATION
AUSTRIAN REQUEST

According to resolution 34 taken by CEN/TC 223 on 1997-06-20 Austria submits summary of national and provincial regulations including actual draft amendments and ordinances that will be enacted in 1998 concerning specification, designation and labelling of soil improver and growing media that lead to the need for the Austrian request for A-deviation.

A) Competence and legalistic structure

1. Federal Ministry for Agriculture and Forestry

- "Fertilizer Act": requirements on quality properties and labelling for fertilizers, soil amendments, growing media and cultivation agents to place on the market
- "Fertilizer Ordinance": general and detailed definitions, specifications, quality requirements and labelling rules for types of fertilizers, soil amendments, growing media and cultivation agents on the basis of the Fertilizer Act
- The "Water Act": regulations for the protection of surface and groundwater; approval procedure for the construction of composting plants; maximum total nitrogen dosage by application of fertilizer on agricultural land

2. Federal Ministry for Environment, Youth and the Family

- "Waste Management Act": Principles of waste management, for example: definition of waste; collection and treatment of waste; recycling systems in respect to environment preservation; importing/exporting of waste; documentation rules etc.
- "Ordinance on the Separate Collection of Biowaste (Organic Waste)"; definition of waste materials to be collected by source separation system.
- Ordinance on the "Quality and marketing of Composts from waste"; requirements for the quality of composts (limit values for pollutants); type and origin of composted materials; analytical methods; rules for designation, labelling and packaging (1st draft 11 march).

3. Provincial Competence

- "Soil Protection Acts" and "Sewage Sludge (SS) and Municipal Solid Waste (MSW) Compost Ordinances": rules for the direct transfer of sewage sludge as well as sewage sludge and MSW compost from the producers facility to the farm where the SS or SS based or MSW compost is spread; control-system (risk assessment) with integrated plot-wise analytical proof of soil parameters.

B) Specific provisions within the federal and provincial legislation
FERTILIZER ACT (Federal law gazette no. 513/1994; no. 117/1998)
Act on the trade with fertilizer, soil amendments, growing media and cultivation agents.

Definitions

§ 1 defines fertilizer.

§ **2** (1–3) contains definitions of soil amendments, growing media and cultivation agents.

***Placing on the market of fertilizer, soil amendments, growing media and cultivation agents* § 5(2):** It is **forbidden to place fertilizer, soil amendments, growing media and cultivation agents on the market,** which ...

1. are not in accordance with an ordinance based on § **7** or
2. are not in accordance with the regulations based on § **8** concerning **labelling** and **packaging ...**
4 **contain sewage sludge, composted sewage sludge** ... or **municipal solid waste compost** unless the exceptions of section 3 are fulfilled.

(Compost derived from the separate collection of organic household waste is enclosed under the definition of MSW compost)

***Admission of types of fertilizer, soil amendments, growing media and cultivation agents* § 6 (1)**: The Federal Minister for Agriculture and Forestry has to **admit by an ordinance** in agreement with the Federal Minister for Health, Sports and Consumer Affairs the **types of fertilizer, soil amendments, growing media and cultivation agents**

Section 2 and 3 precise the **content of this ordinance** especially the minimum requirements which have to be laid down in order to protect health of man and animals, soil fertility and the biosphere.

Pollutants

§ 7 The Federal Minister for Agriculture and Forestry has to **lay down by an ordinance** in agreement with the Federal Minister for Health, Sports and Consumer Affairs

1. amounts of pollutants which have to be beyond the limits of detection in fertilizer, soil amendments, growing media and cultivation agents
2. the limit values of other pollutants in fertilizer, soil amendments, growing media and cultivation agents.

Labelling and packaging

§ 8: The Federal Minister for Agriculture and Forestry has to **lay down by an ordinance** in agreement with the Federal Minister for Health, Sports and Consumer Affairs provided that it is necessary for the protection of health of man and animals, for the protection of soil fertility and the biosphere and for the protection from deception or in the interest of an adequate information of the involved circles

1. designations of fertilizer, soil amendments, growing media and cultivation agents
2. form and extend of the labelling of fertilizer, soil amendments, growing media and cultivation agents
3. type of the packaging or containers in which fertilizer, soil amendments, growing media and cultivation agents have to be sold.

Section 2 specifies the content of an ordinance according to § **8** section 1 concerning labelling.

FERTILIZER ORDINANCE (Federal law gazette no. 1007/1994; no. 240/1998; no. 277/1998)

Ordinance with provisions to execute the fertilizer act

The ordinance is based on the Fertilizer Act and contains requirements for the **designation, the amounts of main and minor constituents, the used raw materials, the manufacturing process, the kind and amount of nutrients and the information on the proper use** for each type of fertilizer, soil amendment, growing media and cultivation agent.

§ 2(1) Maximum heavy metal dosage per hectare and 2 years to be taken into account by the recommendation of the application rate within the labelling in dependence of the heavy metal content of the product when placed on the market

§ 2(2) Limit values for cadmium, chromium and vanadium for fertilizer containing phosphorus (more than 5 % P_2O_5)

§ 2(3) Limit values (cadmium, chromium, lead, mercury, nickel) and orientation values (copper, zinc) for fertilizer and soil amendments containing more than 20 % m/m organic matter (dry matter):

Table 1 — Heavy metal limit and orientation values for fertilizer, soil amendments containing more than 20 % d.m.organic matter (m/m)

element	limit value (mg/kg d.m.)	orientation value (mg/kg d.m.)
lead	150	
cadmium	1	
chromium	100	
copper		100
nickel	60	
mercury	1	
zinc		300

§ 2(4) Orientation values (cadmium, chromium, copper, lead, mercury, nickel, zinc) for mineral fertilizer, fertilizer and soil amendments containing less than 20 % m/m organic matter (dry matter) and cultivation agents

§ 2(5) lays down heavy metal limits for growing media

Table 2 — Heavy metal orientation values for fertilizer and soil amendments containing less than 20 % (d.m.) organic matter (m/m)

element	Orientation value [a] (mg/kg d.m.)
lead	100
cadmium	1
chromium	100
copper	100
nickel	60
mercury	1
zinc	300

[a] if orientation value is exceeded it has to be mentioned within the labelling

Table 3 — Heavy metal Limit values for growing media

element	limit value (mg/kg d.m.)
lead	100
cadmium	1
chromium	100
copper	100
nickel	60
mercury	1
zinc	200

§ 2(6) Limit value for Chromium(VI) for fertilizer, soil amendments, growing media and cultivation agents

§§ 3–16 Further restrictions and provisions and special requirements for declaration and labelling are defined for organic pollutants, organic solvents, radio-activity, physical impurities among others.

§§ 17–24 Detailed rules for declaration, labelling and packaging and requirements for the declaration of the safe use and handling for all types of fertilizer, soil amendments, growing media and cultivation agents including solid and liquid manure when placed on the market.

§§ 26–28 Tolerances for the declaration of plant nutrients and their solubility.

Annex 1, part B

List of types of fertilizer, that are not authorised to be designated as EC-fertilizer, for soil amendments, growing media and cultivation agents.

Detailed provisions for raw materials, constituents and manufacturing process and the declaration of organic and organic-mineral fertilizer, soil amendments, growing media and cultivation agents.

Detailed requirements for the labelling of chemical and physical parameters.

In the case that there are no specific provisions defined in the ordinance quality requirements for growing media are related to the Austrian standard ÖNORM S 2021 "Growing media — requirements, analytical tests, marking of conformity".

Quality requirements for composts as organic fertilizer or constituent of organic fertilizer are related to the Austrian standard ÖNORM S 2200 "Quality Requirements for Biowaste Compost — Marking of Conformity".

WATER ACT (Federal law gazette no. 252/1990)

§ **32 (2)** f. requires an authorisation if the nitrogen dosage by the use of a fertilizer is more than 175 kg per hectare and year on arable land (not permanent covered by living plants) or 210 kg per hectare and year on meadows and pasture land, horticulture or arable land with crop rotations demanding a high nitrogen supply.

WASTE MANAGEMENT ACT (Federal law gazette no. 325/1990; last amended: federal law gazette no. 434/1996)

Measures for waste prevention

§ 7 (12): The Federal Minister for the Environment, Youth and the Family is authorised to **determine by ordinance requirements for the quality of composts or soils generated from waste** (manufactured soil), especially the **type and origin** of the composted or biologically processed materials, **quality criteria** for composts or manufactured soils from waste, **pollutants,** of which there may be **no detectable levels** in the composts or soils made from waste, as well as **analytical methods.** By ordinance Austrian national standards or parts of these can be made compulsory. Furthermore, for the protection from deception or in the interest of an adequate information of the involved circles, the Federal Minister for the Environment, Youth and the Family may issue provisions on **designations for composts or manufactured soils,** the **form and extent of the labelling** and a certain **type of packaging** for the placing on the market of composts or soils made from waste. **Composts or soils made from waste may only be placed on the market, if they meet the requirements determined by the ordinance** of the Federal Minister for the Environment, Youth and the Family."

DRAFT COMPOST ORDINANCE

The ordinance defines compost as product to be placed on the market and requires singularly listed input materials and quality standards for the compost product. Compost in terms of the ordinance may be

- placed on the free market
- delivered by direct transfer from the producer to the user
- applied on the property of the producer in accordance with provincial soil protection regulations

The application itself is not an objective of the ordinance since this is within the scope of the federal Water Act and the provincial soil protection legislation.

(A) Input materials

Defined are type and origin of waste and quality requirements for admissible input materials for the production of compost. The designation COMPOST may be used if listed input materials are used and quality requirements particularly for heavy metals (application area land reclamation qu."B"; see Table 5) are fulfilled. Specific analytical measures are provided in consideration of the origin of distinct waste materials. Municipal sewage sludge is authorised for the Production of COMPOST if the following limit values for heavy metals are not exceeded:

Table 4 — Heavy metal limit values for sewage sludge as input material for the production of COMPOST

element	limit value (mg/kg d.m.)
lead	200
cadmium	3
chromium	300
copper	500
nickel	100
mercury	5
zinc	2 000

Organic wastes originating from a source separated collection system are listed separately. For those materials requirements for analytical measures are only exceptionally defined. The designation BIO WASTE COMPOST may be used if the listed input materials are used and quality requirements particularly for heavy metals (application area agriculture qu."A"; see Table 5) are fulfilled. In this case sewage sludge as input material is excluded.

The additional designation "may be used in ecological agriculture" is authorised for BIO WASTE COMPOST if heavy metal limit values as defined in Annex IIA of EC directive 2092/91 (Ecolocical Agriculture) are not exceeded.

The production and use of MUNICIPAL SOLID WASTE COMPOST is restricted to the use in land reclametion on landfill sites, as Material for the oxidation of methane and as bio-filter material. Additional analytical requirements (organic pollutants) are provided.

MINERAL ADDITIVES for the optimisation of the composting process are limited to 5 % (m/m)

(B) Areas of application

(1) agriculture (including horticulture and hobby-gardening)

(2) land reclamation/landscaping

(3) landfill surface reclamation

(4) methane-oxidation-layer for landfill sites

(5) constituent for soil substrates

(6) bio-filter

(C) Quality requirements

(1) Heavy metal limit values (quality classes)

Table 5 — Heavy metal limit values for compost (draft compost ordinance; Oct. '98)

element	application area *(1) – (6)* *qu. "A"* limit value (mg/kg d.m.)	application area *(2) – (6)* *qu. "B"* limit value (mg/kg d.m.)
lead	150	250
cadmium	1	3
chromium	70	250
copper	150	400
mercury	0,7	3
nickel	60	100
zinc	500	1 200

(2) further parameters with limitation of maximum levels: el. conductivity, organic matter, physical impurities, maximum mesh size, germination test and provisions for the elimination of pathogens

(3) limitation of the compost application rate (dry matter) per hectare and year in dependence of the achieved quality (heavy metals) and the area of application

(D) Provisions for the safe use, labelling

(1) In dependence of the achieved quality and the used input material ("Compost", "Bio waste compost", "MSW compost") the recommendations for the proper use of the product have to refer to restrictions to the admissible area and amount of application

(2) Obligatory and optional declaration of chemical and physical parameters

(E) External quality control

(1) Rules for the regularly batch-wise sampling and measurement of declarable parameters by an authorised laboratory;

determination of analytic

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