ECONOMY, ENVIRONMENT AND AGRICULTURE

Ordinance no XXXX/2026

Summary: *This Ordinance makes the first amendment to, and republishes, Ordinance No 185/2022 of 21 July 2022, which approves the types of non-harmonised fertilising materials, defines the types of raw materials that may be used in their production, and lays down the relevant requirements for placing them on the market.*

Decree-Law No 30/2022 of 11 April 2022 lays down the rules on the placing on the market of non-harmonised fertilising materials and implements in Portuguese law the obligations arising from Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019, laying down rules on the making available on the market of EU fertilising products.

Ordinance No 185/2022 of 21 July 2022, as amended by Correction Notice No 22-A/2022 of 16 September 2022, regulates the requirements for the placing on the market of non-harmonised fertilising materials, the classification of types of non-harmonised fertilising materials, and the definition of the raw materials that may be used in their production.

In view of the need to adapt its Annexes to technical and scientific progress, this Ordinance makes the first amendment to Ordinance No 185/2022 of 21 July 2022, as amended, by adding a new name for a type of fertilising material to Annex I thereto, and deleting other names as a result of the repeal of Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilisers. This Ordinance also clarifies the text in point 14 of Annex II concerning the hygiene requirements to be met during the production process of fertilising materials, and updates Annex V, relating to the reference methods for sampling and analysis of fertilising materials, as well as Annex VI, concerning identification and labelling requirements.

This Ordinance has been subject to the information procedure in the field of technical regulations and rules on information society services, provided for in Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015.

The self-government bodies of the Autonomous Regions of Madeira and the Azores, the National Confederation of Agricultural Cooperatives and Crédito Agrícola de Portugal, C.C.R.L., the Young Farmers Association of Portugal, the National Confederation of Agriculture, AGROBIO – Portuguese Association for Organic Agriculture, the National Data Protection Commission, the National Association of Fertiliser Producers and Importers, the Confederation of Portuguese Farmers, QUERCUS – National Association for Nature Conservation, ZERO – Sustainable Earth System Association, and the National Confederation of Young Farmers of Portugal were consulted.

Thus, pursuant to Article 4(2) of Decree-Law No 30/2022 of 11 April 2022, the Government, through the Secretaries of State for the Economy, the Environment and Agriculture, using the powers delegated by Ordinance No 9341/2025 of 7 August 2012, as amended, Ordinance No 9525/2025 of 11 August 2012, and Ordinance No 9586/2025 of 12 August 2012, as amended, respectively, hereby orders as follows:

Article 1

Object

This Ordinance amends, for the first time, Ordinance No 185/2022 of 21 July 2022, as currently in force, which approves the types of non-harmonised fertilising materials, defines the types of raw materials that may be used in their production, and lays down the relevant requirements for placing them on the market.

Article 2

Amendment to Ordinance No 185/2022 of 21 July 2022

Articles 2 and 6 of Ordinance No 185/2022 of 21 July 2022, as amended, are replaced by the following:

‘Article 2

[…]

1 – […]

a) […]

b) […]

c) […]

d) […]

e) […]

f) […]

g) […]

h) […]

i) […]

j) […]

k) […]

l) […]

m) […]

n) […]

o) […]

p) […]

q) […]

r) […]

s) […]

t) […]

u) […]

v) […]

w) […]

x) […]

y) […]

z) […]

aa) […]

bb) […]

cc) ‘Organic improver’: a soil improver of plant origin, animal origin, or mixed plant and animal origin, used primarily for the purpose of increasing the organic matter content of the soil;

dd) […]

ee) […]

ff) ‘Frass’: a mixture of farmed insect excrement, feed substrate, parts of farmed insects, dead eggs and a content of dead farmed insects not exceeding 5 % by volume and not exceeding 3 % by weight;

gg) *Previous ff)*

hh) *Previous gg)*

ii) *Previous hh)*

jj) *Previous ii)*

kk) *Previous jj)*

ll) *Previous kk)*

mm) *Previous ll)*

nn) *Previous mm)*

oo) *Previous nn)*

pp) *Previous oo)*

qq) *Previous pp)*

rr) *Previous qq)*

ss) *Previous rr)*

tt) *Previous ss)*

uu) *Previous tt)*

vv) *Previous uu)*

ww) *Previous vv)*

xx) *Previous ww)*

yy) *Previous xx)*

2 - For the purposes of this Ordinance, the definitions of ‘Fertiliser’, ‘Mixed fertiliser’, ‘Mineral, chemical or inorganic fertiliser’, ‘Placing on the market’, ‘Soil improver’, ‘Agricultural product’, ‘Packaging’, ‘Manufacturer’, ‘Industrial installation’, ‘Fertilising materials’, ‘Non-harmonised fertilising materials’, ‘Raw material’, ‘Heavy metals’, ‘Micronutrients’, ‘Nutrient, nutrient element or fertilising element’, ‘Economic operator’, ‘EU fertilising product’, ‘Special products’, ‘Traceability’, ‘Registration’, ‘Waste’, ‘Substrate’, ‘Type of fertilising material’ and ‘Tolerance’, as laid down in Article 3 of Decree-Law No 30/2022 of 11 April 2022, shall also apply.

Article 6

[…]

1 - Fertilising materials belonging to Group 5 of Annex I to this Ordinance may not exceed the maximum values for microorganisms and weed seeds and propagules set out in Table 1 of point 6 of Annex II to this Ordinance.

2 - […]’

Article 3

Amendment to the Annexes to Ordinance No 185/2022 of 21 July 2022

Annexes I, II, IV, V and VI to Ordinance No 185/2022 of 21 July 2022 are hereby amended to read as follows:

‘ANNEX I

[…]

(…)

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[…]

1. […]

1.1. […]

Nitrogenous fertilisers					
1	Urea ammonium sulphate	[…]	[…]		[…]

[…]

1) […]

2) […]

3) […]

4) […]

1.2. […]

[…]

1) […]

2) […]

1.2.1. […]

[…]

2. […]

[…]

[…]

1) […]

2) […]

3) […]

4) The calcium, magnesium, and/or sodium content may be declared if such contents are, respectively, equal or greater than 5.7 % Ca (8 % CaO), 1.2 % Mg (2 % MgO), and 2 % S (5 % $S0_3$);

5) […]

6) […]

7) […]

3. Group 3. Organo-mineral fertilisers *

[…]	[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]	[…]
1	[…]	[…]	[…]	[…]	[…]
2	[…]	[…]	[…]	[…]	1. […] 2. […]
3	[…]	[…]	[…]	[…]	3. […] 4. […]
4	[…]	[…]	[…]	[…]	For types 3 and 4:

5	[…]	[…]	[…]	[…]	5. […] 6. […]
6	[…]	Solution or suspension of a type 5 fertiliser.	[…]	[…]	7. […] For types 3, 5 and 6: 8. […] 9. […]

[…]

[…]

1) […]

2) […]

3) […]

4) The calcium, magnesium, and/or sodium content may be declared if those contents are, respectively, equal or greater than 5.7 % Ca (8 % CaO), 1.2 % Mg (2 % MgO), and 2 % S (5 % SO_3);

5) […]

6) […]

7) […]

4. […]

4.1. […][…]

5. […]

[…]	[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]	[…]
1	[…]	[…]	[…]	[…]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […] 7. […] 8. […] 9. […] 10. […] 11. […] 12. […] 13. […] 14. […]
2	[…]	[…]	[…]		
3	Processed insect excrement (*frass*)	Product resulting from the digestion of organic materials, or organic residues listed in Annex IV, by farmed insects under technically controlled conditions after heat treatment at 70 ºC for a minimum of 60 minutes.	Soil improver obtained from the digestion of organic materials by farmed insects, complying with the requirements set out in Annex II and meeting the conditions laid down in points (a), (b), (d) and (e) of Section 2 of	*Frass*, Entomocompost	

			Chapter I of Annex XI to Commission Regulation (EU) No 142/2011 of 25 February 2011.		15. […] 16. […] 17. […] 18. […] 19. […]
4 *Previous 3*	[…]	[…]	[…]	[…]	20. […] 21. […] 22. […] 23. […] 24. […] 25. […] 26. […] 27. […]. 28. […]

[…]

[…]

6. […]

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7. […]

[…]	[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]	[…]
1	[…]	[…]	1. […] 2. Molecular weight below 10 000 Dalton, in the case of proteins of animal origin.	1. […] 2. […] […] […] […]	1. […] 2. […] 3. […] 4. […] 5. […]

2	[…]	Group 1 fertiliser to which type 1 amino acids have been added	1. […] 2. […] 3. Molecular weight below 10 000 Dalton, in the case of proteins of animal origin. 4. […]	1. […] 2. […] […] […] […]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […] 7. […] 8. […]
3	[…]	Group 1 fertiliser to which glutamic acid has been added	1. Glutamic acid.... 0.18 % 2. […] 3. Molecular weight below 10 000 Dalton, in the case of proteins of animal origin. 4. […]	1. […] 2. […] […] […] […]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […] 7. […] 8. […]
4	[…]	Product obtained by the treatment or processing of peat, lignite or leonardite which contains mainly humic acids.	1. […] 2. […]	pH	1. […] 2. […] 3. […] 4. […] 5. […]
5	[…]	Fertiliser from Group 1 to which type 4 humic acids have been added.	1. […] 2. […] 3. […]	[…]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […]
6	[…]	Fertiliser, from Group 1, whose total N content in nitrifiable form (ammoniacal, urea or cyanamide) is at least 50 % of the total N, to which DMPP between 0.8 and 2 % in	1. […] […] […] 2. […]	[…]	1. […] 2. […] 3. […]

		relation to the nitrifiable N has been added.			
7	[…]	Urea-based granular fertiliser from Group 1, coated with or without sulphur and or a biodegradable polymer (polyurethane) for the controlled release of nitrogen.	[…]		1. […] 2. […] 3. […]
8	[Repealed]				
9	[…]	[…]	[…]		1. […] 2. […] 3. […] 4. […] 5. […]
10	[…]	[…]	[…]	1. […] 2. […] 3. […] […] […] […]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […] 7. […]
11	[…]	[…]	[…]	1. […] 2. […] 3. […] […] […] […]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […] 7. […]
12	[…]	[…]	[…]	[…]	1. […] 2. […] 3. […] 4. […]

					5. […] 6. […] 7. […] 8. […]
13	[Repealed]				

[…]

[…]

7.1. […]

[…]	[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]	[…]
1	[…]	1. […] 2. […]	[…]	[…]	1. […] 2. […] 3. […] 4. Complete technical information enabling the user to determine the periods of use (expiry date and storage life of the inoculant).
2	[…]	1. […] 2. […]	[…]	[…]	
3	[…]	1. […] 2. […]	1. […] 2. […]	[…]	1. […] 2. […] 3. […] 4. […] 5. […] 6. […] 7. […] 8. Complete technical information enabling the user to determine the periods of use (expiry date and storage life of the inoculant). 9. […]

[…]

[…]

[…]

1) […]

2) […]

8. […]

[…]

Minimum total contents (% by mass) of declarable micronutrients in inorganic fertilisers, organic fertilisers, organo-mineral fertilisers and other fertilisers and special products:

[…]

ANNEX II

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(…)

1. […]

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2. […]

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3. […]

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6. […]

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Table No 1

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7. […]

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Table No 2

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[…]	[…]			
	[…]	[…]	[…]	[…]
[…]	[…]	[…]	3.0	[…]
[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	3.0	[…]
[…]	[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]	[…]

[…]

Table No 3

[…]

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8. […]

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Table No 4

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[…]

9. […]

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Table No 5

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[…]	[…]
[…]	[…]
[…]	[…]
[…]	[…]
[…]	[…]
[…]	6,0
[…]	[…]
[…]	[…]
[…]	[…]

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10. […]

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Table No 6

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11. […]

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Table No 7

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a) […]

b) […]

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12. […]

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Table No 8

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[…]	[…]		
	[…]	[…]	[…]
[…]	[…]	1,0	[…]
[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]
[…]	[…]	[…]	1.0
[…]	[…]	[…]	[…]
[…]	[…]	[…]	[…]

[…]

[…]

13. […]

[…]

Table No 9

[…]

[…]	[…]	
[…]	50	[…]
[…]	25	
[…]	10	
[…]	200	[…]

[…]

[…]

14. Requirements for the sanitisation of fertilising materials

Biological treatment plants shall subject the waste, for an appropriate period of time, to temperature and humidity conditions capable of inactivating pathogenic microorganisms and weed seeds and propagules, as set out below:

1. […]

a) […]

b) […]

c) […]

2. Systems in which waste undergoes biological treatment by anaerobic digestion:

a) […]

b) Where the temperature conditions and retention time of the waste in the digesters do not comply with the specifications referred to in the preceding point, the following alternative measures shall apply:

i) The waste shall subsequently undergo composting in which it is maintained for at least two weeks at temperatures exceeding 55 °C, with at least two turnings in the case of turned windrows, or for one week at temperatures exceeding 60 °C in the case of static piles with forced aeration;

ii) […]

ANNEX IV

[…]

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[…]

CODE	WASTE
02	[…]
02 01	[…]
02 01 01	[…]
02 01 02	[…]
02 01 03	[…]
02 01 06	[…]
02 01 07	[…]
02 01 99	[…]
02 02	[…]
02 02 01	[…]
02 02 02	[…]
02 02 03	[…]

02 02 04 […]

02 03 […]

02 03 01 […]

02 03 04 […]

02 03 05 […]

02 04 […]

02 04 02 […]

02 04 03 […]

02 05 […]

02 05 01 […]

02 05 02 […]

02 06 […]

02 06 01 […]

02 06 03 […]

02 07 […]

02 07 01 […]

02 07 02 […]

02 07 04 […]

02 07 05 […]

03 […]

03 01 […]

03 01 01 […]

03 01 05 […]

03 03 […]

03 03 01 […]

03 03 07 […]

03 03 08 […]

03 03 10 […]

03 03 11 […]

04	[…]
04 01	[…]
04 01 01	[…]
04 01 07	[…]
04 01 99	[…]
04 02	[…]
04 02 10	Organic matter from natural products [only: *Vermicelle* (dried and ground rabbit skin)].
04 02 20	[…]
04 02 21	[…]
10	[…]
10 01	[…]
10 01 01	[…]
10 01 02	[…]
10 01 03	[…]
15	[…]
15 01	[…]
15 01 01	[…]
15 01 03	[…]
19	[…]
19 05	[…]
19 05 01	[…]
19 05 02	[…]
19 05 03	[…]
19 06	[…]
19 06 03	[…]
19 06 04	[…]
19 06 05	[…]
19 06 06	[…]
19 08	[…]

19 08 05 […]

19 08 12 […]

19 08 14 […]

19 09 […]

19 09 02 […]

19 09 04 […]

19 12 […]

19 12 01 […]

19 12 07 […]

19 12 12 […]

20 […]

20 01 […]

20 01 01 […]

20 01 08 […]

20 01 25 […]

20 01 38 […]

20 02 […]

20 02 01 […]

20 03 […]

20 03 01 […]

20 03 02 […]

ANNEX V

[…]

(…)

[…]

Table No 1

[…]

[…]	[…]
[…]	[…]
	Groups 1, 3, 4, 6 and 7 - NP EN 1482-1 and NP EN 1482-3
	Groups 2, 5, 6 and 7 – NP EN 12579
[…]	Groups 1, 3, 4, 6 and 7 - NP EN 1482-2
	Groups 2 and 5 - NP EN 13040
[…]	Group 1 – NP EN 16109
[…]	Group 1 – NP EN 16847
[…]	Groups 2, 3, 5, 6 and 7 – NP EN 13040 Groups 1 and 4 – NP EN 12048 and NP EN 12049 […]
[…]	Groups 2, 3, 5, 6 and 7 – NP EN 12580 or NP EN 15238 […]
[…]	Groups 2, 3, 5, 6 and 7 – NP EN 13037 Results expressed as the original matter
[…]	Groups 2, 3, 5, 6 and 7 – NP EN 13038 […]
[…]	Groups 1, 3, 6 and 7 – NP EN 15476 and NP EN 15475 […]
	Groups 2, 3 and 5 – NP EN 13652 […]
[…]	Groups 1, 3 and 7 – EN 15475 or EN 15604

	[…]
	Groups 2, 3 and 5 – EN 13652 or EN 15604 […]
[…]	Groups 1, 3 and 7 – NP EN 15562 […]
[…]	Groups 1, 3, 6 and 7 – NP EN 15604 […]
[…]	[…]
[…]	Group 1 – NP EN 15560 - in nitrate-free calcium cyanamide […]
	Group 1 – NP EN 15561 - in calcium cyanamide containing nitrates […]
	Group 1 and 6 - NP EN 15478 - in urea […]
	Groups 1, 3, 6 and 7 - NP EN 15604 – in fertilisers containing nitric, ammoniacal, urea and cyanamide nitrogen […]
	Groups 1, 3, 6 and 7 - NP EN 15750 - in fertilisers containing nitric, ammoniacal and urea nitrogen […]
	Groups 2, 5 and 7 - NP EN 13654-1 or NP EN 13654-2 […] Group 5 – NP EN 16168 […]
[…]	Groups 1, 3 and 7 – NP EN 15479 […] […]
[…]	Groups 1, 3 and 7 – NP EN 15958
[…]	Groups 1, 3 and 7 – NP EN 15957
[…]	Groups 1, 3 and 7 – NP EN 15920
[…]	Groups 1, 3 and 7 – NP EN 15919
[…]	Groups 1, 3 and 7 – NP EN 15956

‘Total’ phosphorus (extraction)	Group 2 – NP EN 13650
[…]	Groups 1, 3 and 7 – NP EN 15959 […] Group 2 and 5 – NP EN ISO 22036 Results expressed as mg kg^{-1} (dry matter)
[…]	Groups 1, 3 and 7 – NP EN 15477 […]
[…]	[…]
[…]	Groups 1, 3 and 7 - NP 3045 and NP EN ISO 11885 […]
‘Total’ potassium (extraction)	Groups 2, 3, 5 and 7 – NP EN 13650 Groups 2, 3 and 5 – NP EN ISO 54321
Potassium (determination)	Groups 2, 3, 5 and 7 – NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 Results expressed as % (dry matter)
[…]	Groups 1, 3 and 7 – NP EN 15960
[…]	Groups 1, 3 and 7 – NP EN 15961
[…]	Groups 1, 3 and 7 – NP EN 15926
‘Total’ calcium (extraction)	Groups 2, 3, 5 and 7 – NP EN 13650 Groups 2, 3 and 5 – NP EN ISO 54321
[…]	Groups 1, 3 and 7 – NP EN 16196 […]
	Groups 2, 3, 5 and 7 – NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 Results expressed as % by mass in dry matter
[…]	Group 4 – NP EN 13475 […]
[…]	[…]
[…]	Group 4 – NP EN 12946 […]
‘Total’ magnesium (extraction)	Groups 2, 3 and 5 – NP EN ISO 54321 Groups 2, 3, 5 and 7 – NP EN 13650
[…]	Grupos 1, 3 e 7 – NP EN 16197 […]

	Groups 1 and 3 - NP EN 16198 […]
	Groups 2, 3, 5 and 7 – NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 Results expressed as % by mass in dry matter
[…]	Group 4 – NP EN 12947 […]
[…]	Groups 1 and 3 - NP EN 16199 […]
[…]	Groups 1 and 3 - NP EN 16032 […]
[…]	Group 1 – NP EN 16195 […]
	[…]
[…]	Groups 1 and 3 – NP EN 16964 and NP EN 16962
[…]	
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[…]	Groups 1 and 3 – NP EN 16963 or NP EN 16965 […]
[…]	Groups 1 and 3 – NP EN 16963 or NP EN 16965 […]
	Groups 1 and 3 - NP EN 15962 […]
[…]	Groups 1 and 3 – NP EN 16963 or NP EN 16965 […]
	Groups 1 and 3 - NP EN 15962 […]
[…]	Groups 1 and 3 – NP EN 16963 or NP EN 16965 […]

	Groups 1 and 3 - NP EN 15962 […]
[…]	Groups 1 and 3 – NP EN 16963 or NP EN 16965 […]
	Groups 1 and 3 - NP EN 15962 […]
[…]	Groups 1 and 3 - NP EN 16963 […]
	Groups 1 and 3 - NP EN 15962 […]
[…]	Groups 1 and 3 – NP EN 16963 or NP EN 16965 […]
	Groups 1 and 3 - NP EN 15962
[…]	Group 4 – NP EN 12945 […]
[…]	[…]
	Group 7 – NP EN 12948 or NP EN 1235 Method A — Results expressed as % in the original matter; Method B: Results expressed as % in dry matter NP EN 1235: Results expressed as % in the original matter
	[…]
	[…]
	[…]
[…]	[…]
[…]	Group 4 – NP EN 13971 […]
[…]	Group 4 – NP EN 16357
[…]	[…]
	Group 5 – NP EN 15935 […]

	Groups 2, 3, 5, 6 and 7 – NP EN 13039 […]
[…]	Groups 5 and 7 - NP EN 15936 […]
	[…]
Repealed	
[…]	Groups 2, 3, 5 and 7 – NP EN 13650/NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 Groups 2, 3 and 5 – NP EN ISO 54321/NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 Results expressed as mg kg^{-1} (dry matter)
[…]	Group 7 – NP EN 13650/NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 or by UV/VIS EAM Groups 2, 3 and 5 – NP EN ISO 54321/NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 or by EAM UV/VIS […]
	Groups 2, 3, 5 and 7 - Incineration at (450 ± 10) ºC and digestion with a hydrochloric solution of the ash / NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 (Annex B) or by EAM UV/VIS […]
[…]	Groups 1, 3 and 7 — NP EN 15925/NP EN 15749 or NP EN ISO 11885 Groups 2 and 5 – NP EN 15925 or by means of hydrochloric acid / NP EN 15749 or NP EN ISO 11885 […]
[…]	Groups 2, 3, 5 and 7 – NP EN 13650 […]
	Groups 2, 3, 5 and 7 - NP EN ISO 54321 Groups 2, 3, 5 and 7 – NP EN 16320 […]
	[…]
[…]	Group 5 – NP EN ISO 6579-1 Group 7 – NP EN 17717 […]

[…]	[…]
	Group 5 – NP EN ISO 16649-3 (1) […]
	Groups 5 – NP EN ISO 9308-2 (1) […]
[…]	Group 5 – NP EN 16087-2 […]
	[…]
	[…]
[…]	[…]
[…]	Group 5 – NP EN 16086-1 Group 5 – NP EN 16086-2, NP EN ISO 11269-2, ISO 17126 […] Results expressed as % of germination
[…]	[…]
	[…] Results expressed as number of plants/L of original matter
[…]	[…]
[…]	
[…]	
[…]	Group 7 – NP EN 15905
[…]	[…]
	[…] Results expressed as number of bacterial CFU per ml or g of original matter
[…]	Group 7 – Plate count using a selective culture medium containing insoluble phosphate and quantification of CFU with a solubilisation halo, in accordance with the methodologies described in Pikovskaya, R. I. (1948) Mobilization of phosphorus in soil in connection with the vital activity of some microbial species, Microbiologiya 17, 362–370; ou Nautiyal, C. S. (1999) An efficient microbiological growth medium for screening phosphate-solubilizing microorganisms,

	FEMS Microbiology Letters 170(1), 265–270. Results expressed as CFU/ml or g of original matter
[…]	[…]
[…]	Group 5 – NP EN 16166
[…]	[…]
[…]	[…]
[…]	[…]
[…]	[…]
[…]	[…]
[…]	Group 5 – NP EN 16190
Mycorrhizal colonisation – mycorrhization efficiency	Group 7 - Method of McGonigle et al. (1990). Described in T.P. McGonigle, M.H. Miller, D.G. Evans, G.L. Fairchild and J.A. Swan. (1990). *A new method which gives an objective measure of colonization of roots by vesicular-arbuscular mycorrhizal fungi*. *New Phytologist*, 115: 495 - 501.
Mycorrhizal colonisation - taxonomic identification of species of Arbuscular mycorrhizal fungi (AMF)	Group 7 – Molecular methods based on PCR with methodology described in: Krüger, M., Stockinger, H., Krüger, C. and Schüßler, A. (2009). DNA-based species level detection of Glomeromycota: one PCR primer set for all arbuscular mycorrhizal fungi. New Phytologist, 183(1): 212–223. https://doi.org/10.1111/j.1469-8137.2009.02835.x Lee, J., Sangsun L. and Young, J.P.W. (2008). Improved PCR primers for the detection and identification of arbuscular mycorrhizal fungi. FEMS Microbiology Ecology, 65(2): 339–349. https://doi.org/10.1111/j.1574-6941.2008.00531.x
Mycorrhizal colonisation – viability and quantification of the inoculum	Group 7 – Methods of extraction and quantification of viable spores with methodology described in: Schalamuk, S. and Cabello, M. (2010). Arbuscular mycorrhizal fungal propagules from tillage and management systems in agroecosystems: possible effects on Glomeromycota diversity Mycologia, 102(3): 624–634. https://doi.org/10.3852/08-118 Boyno, G. et al. (2023). A new technique for the extraction of arbuscular mycorrhizae fungal spores from rhizosphere. Journal of Fungi, 9(8): 845. https://doi.org/10.3390/jof9080845
Free amino acids	Group 7 – Determination by HPLC

[…]

[…]

[…]

a) […]

b) […]

c) […]

d) […]

e) […]

f) […]

g) […]

h) […]

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Table No 2

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ANNEX VI

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A) […]

B) […]

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A) […]

1 - […]

a) […]

b) […]

c) […]

d) […]

e) […]

f) […]

g) […]

2 - […]

[…]

2.1. […]

a) […]

i)[…]

ii)[…]

iii)[…]

b) […]

c) […]

i)[…]

ii)[…]

iii)[…]

2.2. […]

a) […]

b) […]

i)[…]

ii)[…]

iii)[…]

c) […]

d) […]

e) […]

i)[…]

ii)[…]

iii)[…]

f) […]

2.3. […]

a) […]

b) […]

i) In the case of inorganic fertilisers which only declare one micronutrient, as prescribed in column 6;

ii) […]

[…]

c) […]

d) […]

3. […]

a) […]

b) […]

c) […]

d) […]

e) […]

f) […]

i) […]

ii) […]

iii) […]

g) […]

h) For fertilising materials falling under the category ‘Processed Insect Excreta (frass)’, the following statement must be included: ‘Processed frass may have the potential to cause sensitising reactions’;

i) *Previous h)*

j) *Previous i)*

i) […]

(ii) In fermentation processes, the microorganism(s) used;

iii) […]

4. […]

[…]

5. […]

a) […]

b) […]

c) […]

d) […]

e) […]

f) […]

g) […]

h) The shelf life from the date of manufacture under normal storage conditions.

B) […]

[…]

a) The trade name of the fertilising material, in which abbreviations or expressions liable to mislead as to the type or content of the product may not be used, nor any reference to organic production without validation by the Directorate-General for Agriculture and Rural Development (DGADR).

[…]

i) […]

ii) *Repealed*

iii) *Repealed*

iv) […]

b) […]

c) […]

d) […]

e) […]

f) The words ‘low in chlorine’ may only be included when the chloride content is less than 2 %. The words ‘chlorine free’ may only be included when the chloride content is less than 0.3 %.

Article 4

Republication

Ordinance No 185/2022 of 21 July is republished in the annex to this decree, of which it forms an integral part, with the amendments introduced by this Ordinance.

Article 5

Entry into force

This Ordinance shall enter into force on the day following that of its publication.

The Secretary of State for the Economy,

João Rui Ferreira

The Secretary of State for Agriculture,

João Manuel Esteves

The Secretary of State for Agriculture,

João Moura

ANNEX

(referred to in Article 4)

Republication of Ordinance No 185/2022 of 21 July 2022

Article 1

Object

This Ordinance approves the types of non-harmonised fertilising materials, defines the types of raw materials which may be used in their production and lays down the corresponding requirements for placing on the market.

Article 2

Definitions

1 — The following definitions shall apply for the purposes of this Ordinance:

a) 'Humic acids': the organic matter derived from the chemical and biological degradation of plant and animal waste and the synthesising activity of microorganisms, soluble in an alkaline medium and neutral and insoluble in an acid medium;

b) 'Fulvic acids': the organic material resulting from chemical and biological degradation of plant and animal residues and micro-organism synthesis activity, soluble in alkaline, neutral and acid medium;

c) 'Nitrogen fertiliser': elementary fertiliser whose main macronutrient is nitrogen, which can be found in nitric, ammoniacal, amide or in combinations of these forms;

d) 'Binary fertiliser': a compound fertiliser containing two main primary macronutrients;

e) 'Complex fertiliser': compound fertiliser, obtained by chemical reaction, by solution, or in its solid state by granulation, with a declarable

content of at least two of the main macronutrients, and each granule in its solid state contains all the nutrients in its declared composition;

f) ‘Compound fertiliser’: a fertiliser with a declarable content of at least two of the primary macronutrients, obtained chemically, by blending or through a combination of both;

g) ‘Elementary fertiliser’: fertiliser with a declarable content of only one main macronutrient;

h) ‘Fertiliser in solution’: fluid fertiliser without solid particles;

i) ‘Suspension fertiliser’: two-phase fertiliser in which the solid particles are held in suspension in the liquid phase;

j) ‘Fluid fertiliser’: liquid fertiliser in aqueous solution or suspension;

k) ‘Foliar fertiliser’: fertiliser intended for the application and foliar absorption of nutrients;

l) ‘Phosphate fertiliser’: elemental fertiliser whose main macronutrient is phosphorus, which can be found under various chemical combinations of different degrees of solubility;

m) ‘Organic fertiliser’: fertiliser whose nutrients are wholly of plant and, or, animal origin;

n) ‘Organic-mineral fertiliser’: fertiliser obtained by mechanical mixing and, or, chemical combination of inorganic fertilisers and organic fertilisers containing at least 25 % organic matter (or 12 % in the case of fluid fertiliser) and 1 % organic nitrogen, not containing organic synthesis nitrogen;

o) ‘Potassium fertiliser’: elementary fertiliser whose main macronutrient is potassium;

p) ‘Amino acids’: organic molecules with an amino group and a carboxyl group, which form from the combination of proteins which shall act in the plant's growth, its resistance to stress and the absorption of nutrients;

q) ‘Organic nitrogen’: nitrogen that forms part of organic materials of animal or plant origin present in soil or fertilisers;

r) ‘Organic synthesis nitrogen’, nitrogen combined with carbon by industrial organic synthesis, excluding by convention urea and cyanamide nitrogen;

s) ‘Biodegradability’: the ability of complex organic structures to decompose in more simple structures by enzymatic action;

t) ‘Biofertiliser’: product whose active ingredient is living micro-organisms, not pathogenic to humans, animals or plants, or opportunistic pathogens for humans, which promote nutrition and, or, the development of plants, without affecting the biological diversity of the soil and the environment, excluding biological control agents, biofungicides, bionematicides and bio-insecticides;

u) ‘Composting’: aerobic biological degradation of organic waste until it is stabilised, producing a humic substance, called a compound;

v) ‘Compound or compost’: sanitised and stabilised product resulting from the decomposition of organic matter by composting, the characteristics of which are such as to benefit, directly or indirectly, the growth of plants;

w) ‘Ripened compound’: product resulting from the composting process, in which the organic fraction is sanitised in advance of the humification or stabilisation phase, reducing its biodegradability in such a way that its potential for phytotoxin and heat production is negligible;

x) ‘Semi-mature compost’: the product resulting from the composting process, in which the organic fraction has undergone partial decomposition, and is sanitised and partially stabilised;

y) ‘Humic compounds’: complex and heterogeneous compounds of polydisperse material, formed in soils, sediments, fertilising materials and natural waters, by biochemical and chemical reactions, during the degradation and transformation of plant, animal and microbial waste. In

accordance with their chemical fractionation they are divided into three main fractions: humic acids, fulvic acids and humins;

z) ‘Conditioning corrective’: an agricultural improver which is intended to modify, in particular, the physical properties of the soil;

aa) ‘Mineral corrective’: an agricultural improver of mineral origin intended primarily to modify the pH value of the soil;

bb) ‘Liming material’: an agricultural improver of mineral origin whose main function is to increase the pH value of the soil;

cc) ‘Organic corrective’: an agricultural improver of plant origin, or plant and animal origin, used principally for the purpose of increasing the level of soil organic matter;

dd) ‘Declaration’: the indication of the amount of nutrients, including their form and solubility, guaranteed in accordance with the specified tolerance;

ee) ‘Anaerobic digestion’: biological process of mineralisation of organic matter in the absence of oxygen;

ff) ‘Frass’: a mixture of farmed insect excrement, feed substrate, parts of farmed insects, dead eggs and a content of dead farmed insects not exceeding 5 % by volume and not exceeding 3 % by weight;

gg) ‘Sanitisation’: process or processes leading to the suppression or reduction of pathogenic micro-organisms of a compound or compost, namely *Salmonella* spp. and *Escherichia coli*, indicator of faecal contamination;

hh) ‘Macronutrient’: the nutrient that plants need in relatively high amounts;

ii) ‘Main macronutrients or primary nutrients’: nitrogen (N), phosphorus (P) and potassium (K);

jj) ‘Secondary macronutrients or secondary nutrients’: calcium (Ca), magnesium (Mg), sulphur (S) and, in some cultures, sodium (Na) and silicon (Si);

kk) ‘Anthropogenic inert matter’: particles or undesirable fragments of glass, metal and plastic, possibly present in fertilisers, with a diameter greater than 2 mm;

ll) ‘Mycorrhizae’: the mutual association of the symbiotic type existing between certain species of fungi and plant roots;

mm) ‘Reactivity’: the reaction rate of an alkaline mineral soil improver, determined by its decomposition with acid under controlled pH conditions;

nn) ‘C/N ratio’: the ratio between the value of total organic carbon and total nitrogen;

oo) ‘Biodegradable waste’: waste capable of undergoing anaerobic or aerobic decomposition, including in particular food waste, garden waste, paper and cardboard;

pp) ‘Industrial Waste’: the waste generated in industrial production processes, and that which results from the manufacturing activities and distribution of electricity, gas or water;

qq) ‘Urban waste’: the waste from households, or any other waste which, by its nature or composition, is similar to waste from households;

rr) ‘Green waste’: the residues of plant composition from gardens, parks, forests or similar;

ss) ‘Weed seeds and propagules’: the forms of dispersion of weed plants in the wild by means of non-harmonised fertilising materials;

tt) ‘Declared content’: the content of elements which make up the product in accordance with the law applicable for each fertilising material;

uu) ‘Treatment’: the alteration of at least one physical, chemical or biological characteristic of fertilising materials;

vv) ‘Biological treatment’: the type of treatment of biodegradable organic waste which results primarily from the action of micro-organisms, including composting and anaerobic digestion;

ww) ‘Maximum permissible value’: the concentration limit of a given component;

xx) ‘Neutralising value of a liming material’: the number of parts by weight of pure calcium carbonate which has the same neutralising effect as 100 parts by weight of the same improver;

zz) ‘Vermicompost’: the stabilised product obtained from the digestion of organic materials by earthworms under controlled conditions.

2 — For the purposes of this Ordinance, the definitions of ‘Fertiliser’, ‘Mixed fertiliser’, ‘Mineral, chemical or inorganic fertiliser’, ‘Placing on the market’, ‘Soil improver’, ‘Agricultural product’, ‘Packaging’, ‘Manufacturer’, ‘Industrial installation’, ‘Fertilising materials’, ‘Non-harmonised fertilising materials’, ‘Raw material’, ‘Heavy metals’, ‘Micronutrients’, ‘Nutrient, nutrient element or fertilising element’, ‘Economic operator’, ‘EU fertilising product’, ‘Special products’, ‘Traceability’, ‘Registration’, ‘Waste’, ‘Substrate’, ‘Type of fertilising material’ and ‘Tolerance’, as laid down in Article 3 of Decree-Law No 30/2022 of 11 April 2022, shall also apply.

Article 3

Components authorised in production

1. — The production of each type of fertilising materials included in Annex I to this Ordinance, of which it forms an integral part, shall only be permitted from the essential components specified therein.

2. — The incorporation of organic matter of animal or plant origin is not permitted in the production of inorganic fertilisers or mineral soil improvers.

Article 4

Use of waste

1. — The only waste suitable for recovery as a fertilising material is that listed in Annex IV to this Ordinance, of which it forms an integral part, to be used in the production of the types of fertilising materials included in Groups 2, 3 and 5 of Annex I to this Ordinance.

2 — Only the waste indicated in the respective type designation is suitable for recovery as a fertilising material of Group 4 of Annex I to this Ordinance.

Article 5

Biodegradable organic matter

1. — Only raw materials of organic, animal or plant origin expressly included in the list of waste set out in Annex IV to this Ordinance may be used in the production of fertilising materials belonging to Groups 2, 3 and 5 of Annex I to this Ordinance.

2. — Raw materials of animal origin used in the production of fertilising materials must comply with the requirements set out in Regulation (EC) No 1069/2009, of the European Parliament and of the Council of 21 October 2009, and Decree-Law No 33/2017 of 23 March 2017, in its current wording, which ensures the implementation and compliance with the provisions of the aforementioned Regulation.

3. — Fertilising materials of Group 5 of Annex I to this Ordinance must comply with the requirements set out in Annex II to this Ordinance, of which it forms an integral part.

Article 6

Maximum level of microorganisms and of weed seeds and propagules

1. — Fertilising materials belonging to Group 5 of Annex I to this Ordinance may not exceed the maximum values for microorganisms and weed seeds and propagules set out in Table 1 of point 6 of Annex II to this Ordinance.

2. — Non-harmonised fertilising materials containing raw materials of plant origin shall be free from the organisms mentioned in Decree-Law No 154/2005 of 6 September 2005, in its current wording, which updates the phytosanitary regime, creates and defines the protection measures intended to prevent the introduction and spread in the national territory and the European Union of organisms harmful to plants or plant products, whatever their origin or provenance.

Article 7

Maximum level of heavy metals

1. — Fertilising materials of Group 5 of Annex I to this Ordinance must not exceed the maximum permissible values for the parameters of heavy metals corresponding to Classes I, II, II A or III set out in Table 2 in Annex II to this Ordinance.

2. — Where the value of any of the parameters exceeds the maximum permissible values for a class, the class shall be applied in which the maximum permissible value of all the parameters being considered is not exceeded.

3. — Where any value of the parameters of Class III is exceeded, the product cannot be placed on the market as a non-harmonised fertilising material and should be managed as a waste, in accordance with existing rules on waste management, and other applicable legislation.

Article 8

Maximum level of organic compounds, dioxins and furans

Non-harmonised fertilising materials produced from the sewage sludge referred to in No 9 of Annex II to this Ordinance cannot exceed, for any of the classes considered, the maximum permissible values for the concentration of organic compounds, dioxins and furans in Table 5 of Annex II to this Ordinance.

Article 9

Maximum level of anthropogenic inert matter and stones

1. — Fertilising materials belonging to Group 5 of Annex I to this Ordinance may not exceed the maximum permissible values for anthropogenic inert materials and stones corresponding to Classes I, II, IIA or III of Table 4 of Annex II to this Ordinance.

2. — Where the value of anthropogenic inert matter and stones exceeds the maximum permissible values for a class, the class shall be applied in

which the maximum permissible value of all the parameters being considered is not exceeded.

3. — Where the maximum permissible value of anthropogenic inert matter and stones of Class III is exceeded, the product cannot be placed on the market as a fertilising material and should be managed as a waste in accordance with existing rules on waste management, and other applicable legislation.

Article 10

Margins of tolerance

1. — The nutrient content and other parameters of non-harmonised fertilising materials shall comply with the margins of tolerance established in Annex III to this Ordinance, which shall form an integral part thereof, to take account of deviations in manufacture, sampling and analysis.

2. — The manufacturer shall not take systematic advantage of the margins of tolerance set out in Annex III to this Ordinance, of which it forms an integral part.

3. — No tolerances are allowed for the minimum and maximum contents specified in Annex I to this Ordinance.

Article 11

Methods of sampling and analysis

The methods of sampling and analysis provided for in Article 16 of Decree-Law No 30/2022 of 11 April 2022, are set out in Annex V to this Ordinance, of which it forms an integral part.

Article 12

Identification markings and labelling

Non-harmonised fertilising materials placed or made available on the national market after registration in the Register of Non-Harmonised Fertilising Materials (Register) referred to in Article 6 of Decree-

Law No 30/2022 of 11 of April 2022, shall be duly identified with the identification markings provided for in Annex VI to this Ordinance, of which it forms an integral part.

Article 13

Raw materials used in the production of non-harmonised fertilising materials

The raw materials used in the production of non-harmonised fertilising materials shall comply with the provisions set out in Articles 3, 4 and 5 of this Ordinance.

Article 14

Entry into force

This Ordinance shall enter into force on the day following that of its publication.

ANNEX I

Types of non-harmonised fertilising materials

(referred to in Articles 3 to 7, 9 and 10)

Group 1 - National inorganic fertilisers

Group 2 - Organic fertilisers

Group 3 - Organo-mineral fertilisers

Group 4 - Mineral soil improvers

Group 5 - Organic soil improvers

Group 6 - Other improvers

Group 7 - Other fertilisers and special products

1. Group 1. National inorganic fertilisers

1.1. Straight fertilisers

No	Type designation	Data on method of production and essential components	Minimum content of nutrients expressed as the original matter (% by weight). Data on nutrient content. Other data.	Other data on the type designation.	Nutrient content to be declared. Forms and solubilities of the nutrients. Other criteria.
1	2	3	4	5	6
Nitrogenous fertilisers					
1	Urea ammonium sulphate	Chemically obtained product, containing ammonium sulphate and urea as essential components	20 % N Nitrogen determined as ammoniacal and urea Minimum ammoniacal nitrogen content: 4 %. Minimum sulphur content, expressed as sulphur trioxide: 12 % Maximum biuret content: 0.9 %		1. Total nitrogen 2. Ammoniacal nitrogen 3. Urea nitrogen 4. Water-soluble sulphur trioxide.
2	Ammonium	Chemically obtained	8 % total N.	Usual trade names may be	1 – Total nitrogen.

	sulphate solution	product containing ammonium sulphate as its essential ingredient.	8 % ammoniacal nitrogen 9 % water-soluble SO_3.	added.	2 – Ammoniacal nitrogen. 3 – Water soluble SO_3.
No	Type designation	Data on method of production and essential components	Minimum content of nutrients expressed as the original matter (% by weight). Data on nutrient content. Other data.	Other data on the type designation.	Nutrient content to be declared. Forms and solubilities of the nutrients. Other criteria.
1	2	3	4	5	6
Potassium fertilisers					
1	Potassium solution	A product obtained by chemical and/or physical means, in aqueous solution, containing potassium-transporting substances as essential components, without the addition of organic matter of animal or plant origin.	14 % K_2O (water-soluble)	Other common trade names may also be included.	Water-soluble potassium oxide. Chloride content. Content of water-soluble SO_3 (if it exceeds 2.5 %).

Applicable data, where appropriate, on the various types of potassium fertilisers:

1. The sodium (Na) content shall be declared when it is greater than 2.2 % Na (3 % Na_2O);

2. The calcium, magnesium, and/or sodium content may be declared if those contents are, respectively, equal or greater than 5.7 % Ca (8 % CaO), 1.2 % Mg (2 % MgO), and 2 % S (5 % $S0_3$);

3. The declaration of micronutrients shall be made in accordance with point 8 of this Annex;

4. The words ‘low in chlorine’ may be used only where the chlorine content does not exceed 2 % by mass, this content may be declared.

1.2. Fertilisers containing essentially secondary macronutrients

No	Type designation	Data on method of production and essential components	Minimum content of nutrients expressed as the original matter (% by weight). Data on nutrient content. Other data.	Other data on the type designation.	Nutrient content to be declared. Forms and solubilities of the nutrients. Other criteria.
1	2	3	4	5	6
1	Complexed calcium	Water-soluble product obtained by chemically combining calcium with complexing agents	5 % Water-soluble CaO (at least ½ of the declared value must be complexed)	Identification of the complexing agents	1. Total calcium. 2. Water-soluble calcium. 3. Complexed calcium by each of the complexing agents.
2	Complexed calcium solution	Complexed calcium aqueous solution (No 1)	2 % Water-soluble CaO (at least ½ of the declared value must be complexed)	Identification of the complexing agents	1. Total calcium. 2. Water-soluble calcium. 3. Complexed calcium by each of the complexing agents. 4. May bear the words: ‘for foliar application’.

1) The only complexing agents authorised to complex calcium are those indicated in point 1.2.1., which may be designated by means of their abbreviation also set out therein.

2) Where a nutrient is present in complexed form, the pH range guaranteeing acceptable stability of the fractions for each of its forms of application has to be stated.

1.2.1. List of complexing agents for calcium, only for foliar application and/or fertigation, except Zn lignosulphonate, Fe lignosulphonate, Cu lignosulphonate and Mn lignosulphonate which may be applied directly

on the soil.

Acids, or sodium, potassium or ammonium salts of	Alternative designation	Chemical formula	CAS number of the acid (1)
Lignosulfonic acid	LS	No chemical formula available	8062-15-5 (2)
Heptogluconic acid	HGA	$C_7 H_{14} O_8$	23351-51-1

(1) For information purposes only.

(2) For quality reasons, the relative phenolic hydroxyl content and the relative organic sulphur content as measured by EN 16109 must exceed 1.5 % and 4.5 % respectively.

Complexing agents must be identified in accordance with the relevant European standards.

2. Group 2. Organic fertilisers

No	Type designation	Data on method of production and essential components	Minimum content of nutrients expressed as the original matter (% by weight). Data on nutrient content. Other data.	Other data on the type designation.	Nutrient content to be declared. Forms and solubilities of the nutrients. Other criteria.
1	2	3	4	5	6
1	Organic nitrogenous fertiliser (N)	Fertiliser wholly obtained from organic matter of animal and/or plant origin, listed in Annex IV, only with declared nitrogen content.	1. Organic N. .....3 % 2. Organic matter ...50 %	Other common trade names may also be included.	1. Organic nitrogen. 2. Organic matter.
2	NPK organic fertiliser	Fertiliser obtained entirely from organic materials of animal and/or plant origin listed in Annex IV, with declared contents of nitrogen, phosphorus and potassium.	1. Organic N. .....2 % 2. Total P_2O_5 .....2 % 3. Total K_2O .....2 % 4. N + P_2O_5 + K_2O...10 % 5. Organic matter....50 %	Other common trade names may also be included.	1. Total nitrogen. 2. Organic nitrogen. 3. Phosphorus soluble in mineral acids (total). 4. Total potassium. 5. Organic matter.

3	NPK organic fluid fertiliser	Solution or suspension of a type 2 fertiliser	1. Organic N. .....1 % 2. Total P_2O_5 .....1 % 3. Total K_2O .....1 % 4. N + P_2O_5 + K_2O.....3 % 5. Organic matter.....25 %	Other common trade names may also be included.	1. Total nitrogen. 2. Organic nitrogen. 3. Phosphorus soluble in mineral acids (total). 4. Total potassium. 5. Organic matter
4	NP organic fertiliser	Fertiliser wholly obtained from organic material of animal and/or plant origin, listed in Annex IV, with the declared nitrogen and phosphorus contents.	1. Organic N. .....2 % 2. Total P_2O_5 .....3 % 3. N + P_2O_5 .....6 % 4. Organic matter...50 %	Other common trade names may also be included.	1. Total nitrogen. 2. Organic nitrogen. 3. Phosphorus soluble in mineral acids (total). 4. Organic matter
5	NK organic fertiliser	Fertiliser wholly obtained from organic material of animal and/or plant origin, listed in Annex IV, with the declared nitrogen and potassium contents.	1. Organic N. .....3 % 2. Total K_2O .....6 % 3. N + K_2O ..... 10 % 4. Organic matter.....50 %	Other common trade names may also be included.	1. Total nitrogen. 2. Organic nitrogen. 3. Total potassium. 4. Organic matter

Applicable data on the various types of organic fertilisers:

1. At least 85 % of the fertiliser is able to pass through a sieve with a mesh of 10 mm;

2. Data, in descending order, of the quantities by mass of the organic matter used in the manufacture of the fertiliser;

3. The sodium (Na) content shall be declared when it is greater than 2.2 % Na (3 % Na2O);

4. The calcium, magnesium, and/or sodium content may be declared if those contents are, respectively, equal or greater than 5.7 % Ca (8 % CaO), 1.2 % Mg (2 % MgO), and 2 % S (5 % $S0_3$):

5. The declaration of micronutrients shall be made in accordance with point 8 of this Annex;

6. The words ‘low in chlorine’ may be used only where the chlorine content does not exceed 2 % by mass and this content may be declared;

7. The use of preservatives to avoid microbial contamination in fertilising materials falls within the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products. Only substances corresponding to product-type 6 according to Annex V to the above Regulation and which are on the European List of Active Substances or in the Review Programme notified for product-type 6 may be used. Likewise, the labelling of the final product to which these preservatives are added shall comply with the requirements of Articles 58 and 94 of Regulation (EU) No 528/2012.

3. Group 3. Organo-mineral fertilisers *

No	Type designation	Data on method of production and essential components	Minimum content of nutrients expressed as the original matter (% by weight). Data on nutrient content. Other data.	Other data on the type designation.	Nutrient content to be declared. Forms and solubilities of the nutrients. Other criteria.
1	2	3	4	5	6
1	Organo-mineral nitrogenous fertiliser (N)	Fertiliser obtained from blending organic material of animal and/or plant origin, listed in Annex IV, with inorganic fertilisers, only with declared nitrogen content.	1. Total N .....5 % 2. Organic N. .....1 % 3. Organic matter.....25 %	Other common trade names may also be included.	For types 1 to 6: 1. Total nitrogen. 2. Organic nitrogen. 3. Organic matter. 4. If one of the forms of nitrogen (nitric, ammoniacal, urea and cyanamide) is present in an equal or greater content than 1 %, it may be declared. For types 3 and 4: 5. Total phosphorus. 6. Phosphorus which is soluble in neutral ammonium citrate, if its content is equal to or greater than 2 % (P_2O_5) and the content of water-soluble phosphorus is less than this value. 7. Phosphorus which is soluble in neutral
2	Fluid nitrogen organo-mineral fertiliser (N)	Fertiliser obtained from blending organic material of animal and/or plant origin, listed in Annex IV, with inorganic fertilisers, only with declared nitrogen content.	1. Total N .....3 % 2. Organic N. .....1 % 3. Organic matter.....12 %	1. pH 2. Other common trade names may also be included.	
3	NPK organic-mineral fertiliser	Fertiliser obtained from blending organic material of animal and/or plant origin, listed in Annex IV, with inorganic fertilisers and with declared contents of nitrogen, phosphorus and potassium.	1. Total N .....5 % 2. Organic N. .....1 % 3. Total P_2O_5 .....3 % 4. Total K_2O... .....3 % 5. N + P_2O_5 + K_2O...15 % 6. Organic matter.....25 %	Other common trade names may also be included.	
4	Organic-mineral fertiliser NP	Fertiliser obtained from blending organic material	1. Total N .....3 % 2. Organic N.	Other common trade names may also be	

		of animal and/or plant origin, listed in Annex IV, with inorganic fertilisers and with declared contents of nitrogen and phosphorus.	.....1 % 3. Total P_2O_5 .....5 % 4. N + P_2O_5 ..... 10 % 5. Organic matter.....25 %	included.	ammonium citrate and in water, if the content of water-soluble phosphorus is equal to or greater than 2 % (P_2O_5). In this case, this last solubility shall also be declared. For types 3, 5 and 6: 8. Total potassium. 9. Water-soluble potassium.
5	Organic mineral fertiliser NK	Fertiliser obtained from blending organic material of animal and/or plant origin, listed in Annex IV, with inorganic fertilisers and with declared contents of nitrogen and potassium.	1. Total N .....3 % 2. Organic N. .....1 % 3. Total K_2O .....5 % 4. N + K_2O ..... 10 % 5. Organic matter.....25 %	Other common trade names may also be included.	
6	Fluid NK organo-mineral fertiliser	Solution or suspension of a type 5 fertiliser	1. Total N .....3 % 2. Organic N. .....1 % 3. Total K_2O .....3 % 4. N + K_2O .....8 % 5. Organic matter... 12 %	1. pH 2. Other common trade names may also be included.	

* These fertilisers may not contain nitrogen obtained by organic synthesis.

Indications applicable to the various types of organomineral fertilisers:

1. At least 90 % of the fertiliser must pass through a sieve with a mesh aperture of 5 mm, with less than 10 % consisting of the fraction passing through a sieve with a mesh aperture of 1 mm;

2. The organic materials used in the manufacture of the fertiliser shall be indicated in descending order by mass;

3. The sodium (Na) content shall be declared when it is greater than 2.2 % Na (3 % Na2O);

4. The calcium, magnesium, and/or sodium content may be declared if

those contents are, respectively, equal or greater than 5.7 % Ca (8 % CaO), 1.2 % Mg (2 % MgO), and 2 % S (5 % $S0_3$);

5. The declaration of micronutrients, where appropriate, shall be made in accordance with point 8 of this Annex;

6. The words ‘low in chlorine’ may be used only where the chlorine content does not exceed 2 % by mass and this content may be declared;

7. The use of preservatives to avoid microbial contamination in fertilising materials falls within the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products. Only substances corresponding to product-type 6 according to Annex V to the above Regulation and which are on the European List of Active Substances or in the Review Programme notified for product-type 6 may be used. Likewise, the labelling of the final product to which these preservatives are added shall comply with the requirements of Articles 58 and 94 of Regulation (EU) No 528/2012.

4. Group 4. Mineral soil improvers

4.1. Liming materials

No	Type designation	Data on method of production and essential components	Minimum content of elements and/or useful substances expressed as the original matter. Other data.	Elements to be declared. Other criteria.
1	2	3	4	5
1	Improvers based on calcified algae	Product containing calcified algae as its essential ingredient	Minimum neutralising value: 42	1. Neutralising value 2. Total calcium 3. Total magnesium (optional) 4. Moisture (optional) 5. Reactivity and method of determination (optional) 6. Soil incubation results (optional)
2	Lime sludge-based improvers	By-product from the industrial process of cellulose pulp production, containing lime sludge as an essential component.	Minimum neutralising value: 42	1. Neutralising value 2. Total calcium 3. Total magnesium (optional) 4. Moisture (optional) 5. Reactivity and method of determination (optional) 6. Soil incubation results (optional)

5. Group 5. Organic soil improvers

No	Type designation	Data on method of production and essential components	Minimum content of elements and/or useful substances. Other data.	Other data on the type designation.	Useful elements or substances whose content must be declared. Other criteria.
1	2	3	4	5	6
1	Compost soil improver	Product obtained through the controlled transformation and stabilisation of organic waste, set	Compost soil improver with the requirements set out in Annex II	Organic Compost; Composted.	1. Raw materials 2. Moisture 3. pH 4. Electrical

No	Type designation	Data on method of production and essential components	Minimum content of elements and/or useful substances. Other data.	Other data on the type designation.	Useful elements or substances whose content must be declared. Other criteria.
1	2	3	4	5	6
		out in Annex IV.			conductivity 5. Apparent density 6. Organic matter 7. Total nitrogen (N) 8. Phosphorus (P_2O5) total 9. Total Potassium (K_2O) 10. Total Calcium (CaO) 11. Total Magnesium (MgO) 12. C/N Ratio 13. Total Boron (B) 14. Total Cadmium (Cd) 15. Total Lead (Pb) 16. Total copper (Cu) 17. Total Chromium (Cr) 18. Total Mercury (Hg) 19. Total Nickel (Ni) 20. Total zinc (Zn) 21. Degree of maturity 22. Particle size 23. Phytotoxicity index 24. Anthropogenic inert matter and stones 25. *Salmonella* spp. 26. *Eschirichia coli* 27. Weed seeds and propagules.
2	Improver resulting from the substrate used in the production of mushrooms	Product resulting from substrate used in the production of mushrooms in a controlled atmosphere chamber.	Soil improver resulting from the substrate used in the production of mushrooms with the requirements set out in Annex II.		
3	Processed insect excrement (*frass*)	Product resulting from the digestion of organic materials or organic waste listed in Annex IV by farmed insects under technically controlled conditions, following heat treatment at 70 ºC for a minimum of 60 minutes.	Soil improver obtained from the digestion of organic materials by farmed insects, complying with the requirements set out in Annex II and meeting the conditions laid down in points (a), (b), (d) and (e) of Section 2 of Chapter I of Annex XI to Commission Regulation (EU) No 142/2011 of 25 February 2011.	*Frass*, Entomocompost	
4	Worm compost	Stabilised product obtained from the digestion of organic material by worms, under controlled conditions.	Soil improver obtained from the digestion of organic material by worms with the requirements set out in Annex II.		

No	Type designation	Data on method of production and essential components	Minimum content of elements and/or useful substances. Other data.	Other data on the type designation.	Useful elements or substances whose content must be declared. Other criteria.
1	2	3	4	5	6
					28. Organic, dioxin and furan compounds.

Indications applicable to the various types of organic improvers:

The use of preservatives to avoid microbial contamination in fertilising materials falls within the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products. Only substances corresponding to product-type 6 according to Annex V to the above Regulation and which are on the European List of Active Substances or in the Review Programme notified for product-type 6 may be used. Likewise, the labelling of the final product to which these preservatives are added shall comply with the requirements of Articles 58 and 94 of Regulation (EU) No 528/2012.

6. Group 6. Other soil improvers

No	Type designation	Data on method of production and essential components	Minimum content of elements and/or useful substances. Other data.	Elements to be declared. Other criteria.
1	2	3	4	5
1	Water-retaining soil improver	An organic synthetic product derived from urea and formaldehyde	1. Capacity of water retention after dry at least 50 % v/v 2. Minimum content of organic matter of 95 % (by mass) of dry matter 3. A dry matter content of at least 30%	1. Water retention capacity 2. Organic matter 3. Dry matter 4. Volumetric mass 5. Total

No	Type designation	Data on method of production and essential components	Minimum content of elements and/or useful substances. Other data.	Elements to be declared. Other criteria.
1	2	3	4	5
			4. Maximum density of 0.06 kg/ dm^3 5. Minimum content of total nitrogen 36 % (by mass) 6. Maximum content of urea nitrogen 5 % (by mass)	nitrogen 6. Urea nitrogen

7. Group 7. Other fertilisers and special products

No	Type designation	Data on method of production and essential components	Minimum content of nutrients (expressed as % by weight). Data on nutrient content. Other data.	Other data on the type designation.	Nutrient content to be declared. Forms and solubilities of the nutrients. Other criteria.
1	2	3	4	5	6
1	Amino acids	Free amino acid based product, obtained by one of the following processes: - Protein hydrolysis - Synthesis - Fermentation	1. Free amino acids....6 % 2. Molecular weight below 10 000 Dalton, in the case of proteins of animal origin	1. pH 2. The designation type may be followed, depending on the case, by one of the following various requirements: - For foliar application; - For the preparation of nutritional solutions; - For fertigation.	1. Free amino acids 2. Total nitrogen 3. Organic nitrogen 4. Other forms of N (if they exceed 1 %) 5. Qualitative aminogram with the quantification, at least, of those amino acids which exceed 20 % of the total
2	Amino acid fertiliser	Group 1 fertiliser to which type 1 amino acids have been added	1. Free amino acids....2 % 2. N+ P2O5 + K2O ...10 %, if it contains any of these elements in mineral form.	1. pH 2. The designation type may be followed, depending on the case, by one of the following various	1. All the requirements applicable to the fertiliser to which the amino acids have been added

			3. Molecular weight below 10 000 Dalton, in the case of proteins of animal origin 4. All the requirements specified for the fertiliser	requirements: - For foliar application; - For the preparation of nutritional solutions; - For fertigation.	2. Free amino acids. 3. Total nitrogen 4. Organic nitrogen 5. Other forms of N (if they exceed 1 %) 6. Water-soluble phosphorus (if it exceeds 1 %) 7. Water-soluble potassium (if it exceeds 1 %) 8. Qualitative aminogram with the quantification, at least, of those amino acids which exceed 20 % of the total
3	Fluid fertiliser with glutamic acid	Group 1 fertiliser to which glutamic acid has been added	1. Glutamic acid.... 0.18 % 2. N+ P2O5 + K2O ...10 %, if it contains any of these elements in mineral form. 3. Molecular weight below 10 000 Dalton, in the case of proteins of animal origin 4. All the requirements specified for the fertiliser	1. pH 2. The designation type may be followed, depending on the case, by one of the following various requirements: - For foliar application; - For the preparation of nutritional solutions; - For fertigation.	1. All the requirements applicable to fertiliser to which glutamic acid has been added 2. Glutamic acid. 3. Total nitrogen 4. Organic nitrogen 5. Other forms of N (if they exceed 1 %) 6. Water-soluble phosphorus (if it exceeds 1 %) 7. Water-soluble potassium (if it exceeds 1 %) 8. Qualitative aminogram

					with the quantification of the glutamic acid.
4	Humic acids	Product obtained by the treatment or processing of peat, lignite or leonardite which contains mainly humic acids	1-Humic acids……..7 % Humic compounds (humic acids + fulvic acids) 15 %	pH	1. Humic compounds 2. Humic acids 3. Fulvic acids 4. Total nitrogen (if it exceeds 1 %) 5. Water-soluble potassium (if it exceeds 1 %)
5	Humic acid fertiliser	Fertiliser from Group 1 to which type 4 humic acids have been added	1. Humic acids…….. 3 % 2. Humic compounds (humic acids + fulvic acids) 6 % 3. All the requirements specified for the fertiliser	pH	1. All the requirements for fertilisers to which humic acids have been added 2. Humic compounds 3. Humic acids 4. Fulvic acids 5. Total nitrogen (if it exceeds 1 %) 6. Water-soluble potassium (if it exceeds 1 %)
6	Fertiliser with the nitrification inhibitor DMPP (3,4 – dimethylpyrazole phosphate)	Fertiliser, from Group 1, whose total N content in nitrifiable form (ammoniacal, urea or cyanamide) is at least 50 % of the total N, to which DMPP between 0.8 and 2 % in relation to the nitrifiable N has been	1. Minimum and maximum content of the inhibitor expressed as a percentage by mass of the total nitrogen present as ammoniacal and urea nitrogen Minimum: 0.8 % Maximum: 2.0 % 2. All the requirements specified for the fertiliser	pH	1. All the requirements applicable to the fertiliser to which the nitrification inhibitors have been added 2. Name of the inhibitor (DMPP) and its percentage in relation to the N in nitrifiable form 3. Full technical data

		added.			to enable the user to determine the periods of use and application rates of the fertiliser depending on the crop it is intended for
7	Coated urea	Group 1 fertiliser, in granular form and based on urea, coated with or without sulphur and/or with a biodegradable polymer (polyurethane) for controlled nitrogen release	All the requirements specified for the fertiliser		1. All the requirements specified for a fertiliser that has been coated. 2. Identification of the materials used in coating and quantities. 3. Full technical data to enable the user to determine the periods of use and application rates of the fertiliser depending on the crop it is intended for.
8	[Repealed]				
9	Soft ground rock phosphate with red seaweed* * Provided they are not plant protection products due to their role as a plant growth	Soft ground rock phosphate with the addition of red seaweed, containing secondary nutrients (calcium and magnesium).	All the requirements specified for the fertiliser. Arsenic (As) ≤ 40 mg/kg. MS Cadmium (Cd) ≤ 1.5 mg/kg MS Lead (Pb) ≤ 120 mg/kg MS Mercury (Hg) ≤ 1 mg/kg MS		1. All the requirements specified for a fertiliser to which red seaweed has been added. 2. Total calcium (in CaO) 3. Total magnesium (in Mg) 4. Identification of the seaweed added to the fertiliser. 5. Full technical data to enable the user to

	regulator.				determine the periods of use and application rates of the fertiliser depending on the crop it is intended for.
10	Solid algae extract* * Provided they are not plant protection products due to their role as a plant growth regulator.	Product obtained by the extraction and hydrolysis of marine algae (*Ascophyllum nodosum*)	Organic matter ……8 % Total K_2O content…..1.5 % Arsenic (As) ≤ 40 mg/kg. MS Cadmium (Cd) ≤ 1.5 mg/kg MS Lead (Pb) ≤ 120 mg/kg MS Mercury (Hg) ≤ 1 mg/kg MS	1. pH 2. Electrical conductivity. 3. The designation type may be followed, depending on the case, by one of the following various requirements: – For foliar application; – For the preparation of nutritional solutions; – For fertigation.	1. Organic matter. 2. Total potassium oxide (K2O). 3. Nutrient content if it exceeds 1 %. 4. Total nitrogen (N) (if it exceeds 1 %). 5. Free amino acids (whenever from seaweed and if they exceed 1 %). 6. Identification of the algae species. 7. Full technical data to enable the user to determine the periods of use and application rates of the fertiliser depending on the crop it is intended for.
11	Algae extract* liquid	Product obtained from aqueous solution type 10 or product based on liquid extract of the seaweed *Ecklonia maxima*, obtained by physical extraction	Organic matter ……8 %** Total K_2O content…..1.5 % Arsenic (As) ≤ 40 mg/kg. MS Cadmium (Cd) ≤ 1.5 mg/kg MS Lead (Pb) ≤ 120 mg/kg MS Mercury (Hg) ≤ 1 mg/kg MS	1. pH 2. Electrical conductivity. 3. The designation type may be followed, depending on the case, by one of the following various requirements: – For foliar application; – For the	1. Organic matter. 2. Total potassium oxide (K2O). 3. Nutrient content if it exceeds 1 %. 4. Total nitrogen (N) (if it exceeds 1 %). 5. Free amino acids (whenever from

	* Provided they are not plant protection products due to their role as a plant growth regulator.		** Except product based on liquid extract from the algae *Ecklonia max*.	preparation of nutritional solutions; – For fertigation.	seaweed and if they exceed 1 %). 6. Identification of the algae species. 7. Full technical data to enable the user to determine the periods of use and application rates of the fertiliser depending on the crop it is intended for.
12	Algae extract* and fulvic acids * Provided they are not plant protection products due to their role as a plant growth regulator.	Product obtained by the extraction and hydrolysis of marine algae (*Ascophyllum nodosum*) blended with fulvic acids.	Organic matter .....8 % Fulvic acids .....5 % Total K_2O content.....1.5 % Arsenic (As) ≤ 40 mg/kg. MS Cadmium (Cd) ≤ 1.5 mg/kg MS Lead (Pb) ≤ 120 mg/kg MS Mercury (Hg) ≤ 1 mg/kg MS	pH	1. Organic matter. 2. Total potassium oxide (K2O). 3. Nutrient content if it exceeds 1 %. 4. Fulvic acids. 5. Total nitrogen (N) (if it exceeds 1 %). 6. Free amino acids (whenever from seaweed and if they exceed 1 %). 7. Identification of the algae species. 8. Full technical data to enable the user to determine the periods of use and application rates of the fertiliser depending on the crop it is intended for
13	[Repealed]				

CFU = colony forming units (viable bacteria).

** Effect demonstrated by submitting paper(s) published in peer-reviewed scientific journal(s) with an evaluation panel (*referees*) directly concerning the subject in question.

7.1. Biofertilisers

No	Type designation	Data on the constituent components of the inoculant	Minimum content of active ingredients expressed as the original matter. Other data.	Other data on the type designation.	Identity of the active ingredient to be declared. Crop it is intended for. Other data.
1	2	3	4	5	6
1	Product with nitrogen fixing bacteria	1. Inoculant that includes strain(s) of bacteria that have a scientifically demonstrated** effect on fixing nitrogen. 2. Reference to solid or liquid (sterile) support material of the inoculant and its physical and chemical composition.	The inoculant shall contain only nitrogen-fixing bacteria (developed from pure cultures) at a concentration greater than 10^9 CFU/ml or/g.	Inoculant for seeds and soil.	1. Identification of the strains of bacteria that make up the inoculant. Reference to the geographic origin. 2. Crop(s) for which it is intended; 3. Application rate (/kg of seed or /ha). 4. Complete technical information enabling the user to determine the periods of use (expiry date and storage life of the inoculant).
2	Product containing phosphorus-solubilising bacteria	1. Inoculant that includes strain(s) of bacteria that have a scientifically demonstrated** effect on solubilising phosphorus. 2. Reference to solid or liquid (sterile) support material of the inoculant and its physical and chemical	The inoculant must only contain phosphorus solubilising bacteria (grown from pure cultures with a concentration greater than 10^8 CFU/ml or/g.	Inoculant for seeds and soil	

		composition.			
3	Product containing mycorrhizae	1. Inoculant including mycorrhizal fungi, which has a scientifically demonstrated** effect in the rooting, development and productivity of plants. 2. Reference to solid or liquid (inert and sterile) support material of the inoculant and its physical and chemical composition.	1. The inoculant must contain fungi developed from pure cultures and be free of microbiological contaminants. 2. Concentration of inoculum of each species of mycorrhizal fungus with demonstrated agronomic efficacy **	The designation type may be followed, depending on the case, by one of the following various requirements: - Inoculant for seeds and soil; - For the preparation of nutritional solutions; - For fertigation.	1 - Identification of the gender and of the species of fungi that make up the inoculant. Reference to the geographic origin. 2. - Concentration of inoculum of each species of mycorrhizal fungus. 3 - pH. 4 - Electrical conductivity. 5 - Total contents when each element exceeds 3 %: - Nitrogen (N); - Phosphorus (P_2O_5); - Potassium (K_2O); - Calcium (CaO); - Magnesium (MgO). 5 - Sodium content (NaO). 6 - Crop(s) for which it is intended. 7 - Application rate (/kg of seed or /ha). 8 - Complete technical information enabling the user to determine the periods of use (expiry date and storage life of the inoculant). 9 – Incompatibilities.

CFU = colony forming units (viable bacteria).

** Effect demonstrated by submitting paper(s) published in peer-reviewed scientific journal(s) with an evaluation panel (*referees*) directly concerning the subject in question.

Indications applicable to the various types of other fertilisers and special

products:

1. The declaration of micronutrients shall be made in accordance with point 8 of this Annex;

2. The use of preservatives to avoid microbial contamination in fertilising materials falls within the scope of Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products. Only substances corresponding to product-type 6 according to Annex V to the above Regulation and which are on the European List of Active Substances or in the Review Programme notified for product-type 6 may be used. Likewise, the labelling of the final product to which these preservatives are added shall comply with the requirements of Articles 58 and 94 of Regulation (EU) No 528/2012.

8. Micronutrient fertilisers: inorganic fertilisers, organic fertilisers, organo-mineral fertilisers and other fertilisers and special products

The fertilisers listed in Groups 1, 2, 3 and 7 may contain micronutrients, either because they are added intentionally during the manufacturing process, or because they are the usual ingredients of the raw materials that supply macronutrients. Where such micronutrients are present in quantities at least equal to the minimum contents shown in the following table, they must always be declared in the first case and may be declared in the second.

Minimum total contents (% by mass) of declarable micronutrients in inorganic fertilisers, organic fertilisers, organo-mineral fertilisers and other fertilisers and special products:

Micronutrients	Fertilisers for soil application		Fertilisers for foliar application
	Intended for arable crops, tree crops and bush crops	For vegetable crops	
Boron (B)	0.01	0.01	0.01

Cobalt (Co)	0.002	0.002	0.0005
Copper (Cu)	0.01	0.002	0.002
Iron (Fe)	0.5	0.02	0.02
Manganese (Mn)	0.1	0.01	0.01
Molybdenum (Mo)	0.001	0.001	0.001
Zinc (Zn)	0.01	0.002	0.002

ANNEX II

Additional requirements applicable to fertilising materials included in Group 5 – Organic improvers (referred to in Articles 5 to 9)

1. Organic matter

Fertilising materials which are wholly or partially composed of organic waste, should contain a minimum content of organic matter of 30 % (% by mass refer to dry matter).

2. Moisture

The maximum moisture content allowed in fertilising materials, expressed as a percentage by mass, is 40 %.

3. Particle size

In general, 99 % of the matter that makes up a fertilising material should pass through a 25 mm square-meshed sieve.

4. pH

The pH of the fertilising material should be between 5.5 and 9.0.

5. Phytotoxicity

Fertilising materials of organic origin are considered to be non-phytotoxic provided that the index resulting from their submission to one of the phytotoxicity tests in Annex V to this Ordinance reveals no phytotoxicity.

6. Maximum permissible levels of microorganisms, weed seeds and propagules

Fertilising materials of organic origin must not exceed the maximum values of pathogenic microorganisms (values refer to fresh matter) or of weed seeds and propagules set out in Table 1.

Table 1 - Maximum permissible levels of pathogenic microorganisms, weed seeds and propagules.

Pathogenic microorganisms	Maximum permissible values
Salmonella spp.	Absent in 25 g of fertilising materials produced
Escherichia coli	<1 000 cells/g of fertilising materials produced
Weed seeds and propagules	3 viable units/Litre

7. Maximum permissible values of heavy metals

Fertilising materials composed wholly or partially of organic waste must not exceed, in accordance with the relevant class, the heavy metal content set out in Table 2. The maximum quantity values which may be added annually to soils are set out in Table 3.

These values may be updated periodically, in accordance with advances in technical and scientific knowledge.

Table 2 – Maximum permissible values for the ‘total’ content of heavy metals in fertilising materials with organic components, by class (milligrams per kilogram of dry matter).

Parameter	Fertilising material			
	Class I	Class II	Class II A	Class III
Cadmium (Cd)	0.7	1.5	3.0	5.0
Lead (Pb)	100	150	300	500
Copper (Cu)	100	200	400	600
Chromium (Cr)	100	150	300	400
Mercury (Hg)	0.7	1.5	3.0	5.0
Nickel (Ni)	50	100	200	200
Zinc (Zn)	200	500	1000	1500

Note. ‘Total’ content shall correspond to the fraction that is soluble in aqua regia.

Table 3 – Maximum annual quantities of heavy metals that may be added to soils.

Parameter	Maximum annual quantities that may be added to soils (grams per hectare and per year) *
Cadmium (Cd)	30
Lead (Pb)	2250
Copper (Cu)	3000
Chromium (Cr)	3000
Mercury (Hg)	30
Nickel (Ni)	900
Zinc (Zn)	7500

* These quantities depend on the characteristics of the fertilising materials and the soil where it is to be applied; the quantities indicated refer to average values of heavy metals added to the soil over a 10-year period of application.

8. Maximum permissible values of anthropogenic inert matter and stones

Fertilising materials made up, wholly or partially, by organic waste must not exceed the values set out in Table 4, in accordance with the corresponding class.

Table 4 – Maximum permissible values for the ‘total’ content of anthropogenic inert matter*, stones with a particle size greater than 5 mm (values by mass refer to dry matter), in fertilising materials with organic components.

Parameter	Fertilising material			
	Class I	Class II	Class II A	Class III
Anthropogenic inert matter (%)*	0.5	1.0	2.0	3.0
Stones > 5 mm (%)	5.0	5.0	5.0	-

* Includes glass, metals and plastics, whose particles have a diameter greater than 2 mm.

9. Maximum permissible values of organic compounds, dioxins and furans

Fertilising materials produced from sludge from Urban Wastewater Treatment Plants which simultaneously treat industrial wastewater or similar or from Industrial Wastewater Treatment Plants may not exceed, in all classes, the content of organic compounds, dioxins and furans set out in Table 5.

These values may be updated periodically, in accordance with advances in technical and scientific knowledge.

These parameters should be analysed once a year.

Table 5 – Maximum permissible values of the content of organic compounds, dioxins and furans, in the cases described in this paragraph, for all classes of fertilising materials.

Organic compounds	Maximum permissible values (mg/kg ms)*
AOX (adsorbable organic halogen compounds or adsorbable organic halides)	500
LAS (linear alkylbenzene sulphonate)	2600
DEHP di (2-ethylhexyl) phthalate	100
NPE (nonylphenols and nonylphenol ethoxylates)	50
PAH (polycyclic aromatic hydrocarbons)	6.0
PCB (polychlorinated biphenyls)	0.8
Dioxins and furans	Maximum permissible values (ng TE/kg ms)**
PCDD (polychlorinated dibenzo-p-dioxins) PCDF (polychlorinated dibenzo-furans)	100

* mg/kg ms – milligram/kg of dry matter.
** ng TE/kg ms – nanograms of toxicity equivalent/kg of dry matter.

10. Degree of maturity of the fertilising materials

For the purposes of this Ordinance there are only two categories of fertilising materials according to degree of maturity (Table 6).

Table 6 – Categories of fertilising materials according to degree of maturity, following the Rottegrad classification.

Temperatures reached in the self heating test in Dewar flasks (T ºC)	Degree of maturity	Category of fertilising material
T ≤40	IV and V	Mature
40 < t < 50	III	Semi-mature

11. Use of the fertilising material

The use of the fertilising material is restricted to its class (Table 7).

Table 7 – Use of the fertilising materials according to class.

Class of fertilising material	Use
Classes I and II	Agriculture
Class IIA	Tree and bush crops, namely orchards, olive groves and vineyards; Forest species.
Class III	Soil where it is not intended to plant crops for human food and animal feed: • the final covering of landfills and rubbish dumps, quarries and mines to restore the landscape; • the covering of embankments and ditches, in the case of road construction (landscape integration); • the fertilisation of soils for forestry (species whose fruit is not used for human food or animal feed); • bioenergy crops; • gardening; flower production (excluding edible crops); • football pitches and golf courses.

The possibility of using semi-mature or mature fertilising materials as an organic improver essentially depends on the time between its application to the soil and sowing or planting:

a) Fresh and semi-mature fertilising material may only be used on soils intended for growing tree and bush crops (namely vineyards, olive

groves, orchards), arable crops, pastures, floriculture, plants, lawns, forestry, provided the spreading and incorporation are carried out at least four and three weeks respectively before sowing or planting. Its incorporation into the soil should be carried out up to 48 hours after spreading;

b) Mature fertilising materials may be used on soils intended for tree and bush crops (namely vineyards, olive groves, orchards), arable crops, pastures, floriculture, plants, lawns, forestry, where spreading and incorporation are carried out less than three weeks before sowing or plantation. or in the case of certain already established crops where the fertilising materials is able to contact the roots, e.g. in grasslands, pastures, orchards and lawns.

At least four weeks should pass between the application of the fertilising materials and harvesting or making the pastures available for cattle.

12. Limits on the use of fertilising materials due to the characteristics of the soil

The maximum permissible values of the ‘total’ content of heavy metals in soils where it is intended to apply organic fertilising materials are set out in Table 8.

Table 8 – Maximum permissible values of the ‘total’* heavy metal content in soils (referring to dry matter) in which it is intended to apply fertilising materials.

Element	Maximum permissible values in the soil (milligrams per kilogram)		
	5 ≤ pH < 6	6 ≤ pH < 7	pH ≥ 7
Cadmium (Cd)	0.5	1.0	1.5
Lead (Pb)	50	70	100
Copper (Cu)	20	50	100
Chromium (Cr)	30	60	100
Mercury (Hg)	0.1	0.5	1.0

Nickel (Ni)	15	50	70
Zinc (Zn)	60	150	200

* The fraction soluble in aqua regia.

The fertilising material may only be incorporated into the soil after prior knowledge of the corresponding pH and heavy metal content and must not be used in soils where the concentration of any of the elements mentioned exceeds the values shown in Table 8.

In soils with a very acidic reaction (pH (H_2O) less than 5.0) the application of fertilising materials may only be carried out after liming the soil to raise the pH to values above 5.0.

13. Maximum quantities of fertilising materials to apply to the soil

The maximum quantities of fertilising materials to apply to the soil, according to its class, are presented in Table 9.

Table 9 – Maximum quantity of fertilising materials by class (referring to fresh matter) to apply to the soil.

Class	Maximum quantity of fresh fertiliser (referring to fresh matter) to apply to the soil (tonnes per hectare)	
I	50	Annually *
II	25	
IIA	10	
III	200	Every 10 years

* It is permitted, however, to apply double, three, four or five times these quantities, provided the frequency of their application is, respectively, equal to or greater than two, three, four or five years.

The quantities to be applied depend not only on the characteristics of the soil, but also on the fertilising materials, and should comply with the legislation in force in respect to the application limits of nutrients, particularly nitrogen.

Soils which receive fertilising materials should always be analysed prior to their application and at least during an interval of four years (irrespective of the application), unless its characteristics recommend a shorter interval. As regards holdings with forest species or intended for them (whose fruit is not used in human food or animal feed), covering landfills and rubbish dumps, quarries and mines and embankments and ditches, the frequency for taking soil samples and their analysis may be higher (10 years).

The analytical tests to be carried out on soil samples taken from agricultural or forestry holdings and on plots receiving or having received fertilising materials shall be the following: organic matter; pH; lime requirement (where necessary); extractable phosphorus, potassium and magnesium; extractable iron, manganese, zinc, copper and boron; total cadmium; total lead; total copper; total chromium; total mercury; total nickel and total zinc.

14. Requirements for the sanitisation of fertilising materials

Biological treatment plants shall subject the waste, for an appropriate period of time, to temperature and humidity conditions capable of inactivating pathogenic microorganisms and weed seeds and propagules, as set out below:

1. Systems where the biological treatment of waste is entirely carried out by composting:

a) In static compost pile systems with forced ventilation where the pile of waste is not turned and is covered with a layer of material used as a thermal insulator, subjecting it to airing through inflation or suction, the whole mass of waste should remain at a minimum temperature of 60 ºC and a degree of moisture greater than 40 % for at least two weeks;

b) In turned-windrow systems in which the composting mass undergoes periodic turning, with or without forced aeration, the waste shall be subjected for at least four weeks to temperature and humidity conditions exceeding 55 °C and 40 %, respectively, with at least three turnings being carried out;

c) In systems where the first phase of the composting process (thermophilic) occurs in aerobic reactors, inside which the environmental conditions are controlled, the whole mass of waste contained therein should remain for as long as necessary for sanitisation (pasteurisation) to take place effectively and efficiently, at a temperature of at least 60 ºC to ensure the destruction of faecal microorganisms, and the moisture content should remain at values greater than 40 %.

2. Systems in which waste undergoes biological treatment by anaerobic digestion:

a) The average retention time of the waste in the anaerobic digester must exceed 20 days at temperatures above 53 ºC;

b) Where the temperature conditions and retention time of the waste in the digesters do not comply with the specifications referred to in the preceding point, the following alternative measures shall apply:

i) The waste shall subsequently undergo composting in which it is maintained for at least two weeks at temperatures exceeding 55 °C, with at least two turnings being carried out in the case of turned windrows, or for one week at temperatures exceeding 60 °C in the case of static piles with forced aeration;

ii) The waste should be subjected to a temperature of 70 ºC for one hour before being placed inside the anaerobic reactors.

ANNEX III

Margins of tolerance (referred to in Article 10)

Tolerances for fertilisers, liming materials, other fertilisers and special products:

a) The tolerances indicated in paragraphs 1, 2 and 3 are the permitted deviations between the value found in the determination of a characteristic and its declared value;

b) They are intended to allow for deviations in manufacture, sampling and analysis;

c) No tolerances are allowed for the minimum and maximum values specified in the tables in Annex I to this Ordinance;

d) The established tolerances must not be systematically taken advantage of;

e) A batch of fertiliser or soil improver is deemed to be in compliance with this Ordinance, with regard to a declared content, when its control, according to the prescribed sampling and analysis methods, provides a result which does not deviate from that declared content by more than the tolerance applicable to that fertiliser or soil improver.

1. Fertilisers

a) If no maximum value has been set, the excess of a nutrient in relation to its declared value shall not be subject to any restriction;

b) With regard to the guaranteed nutrient content in the various types of fertilisers, the following tolerances are allowed:

1.1. Inorganic fertilisers

1.1.1. Straight fertilisers

a) Nitrogenous fertilisers	Absolute values as % by mass expressed as: N

Urea – ammonium sulphate	0.4

1.1.2. Fertilisers containing essentially secondary macronutrients

The tolerances allowed for calcium content shall be ¼ of the declared content for that nutrient, with a maximum of 0.9 % absolute value for CaO, or 0.64 % for Ca.

1.2. Organic fertilisers

a) Nitrogen organic fertilisers	Absolute values as % by mass expressed as: N
Organic N	1.0
b) NPK, NP and NK organic fertilisers	N, P_2O_5 and K_2O
b.1) Nutrients - Total N - P_2O_5 - K_2O	 1.1 1.1 1.1
b.2) Sum of the negative deviations from the declared values: - NP and NK fertilisers - NPK fertilisers	 1.5 1.9
c) Organic matter	
The tolerance shall be 1/10 of the declared value for granular fertilisers and 1/8 of the declared value for pulverised fertilisers and liquid fertilisers.	

1.3. NPK, NP and NK organo-mineral nitrogenous fertilisers

a) Nutrients	Absolute values as % by mass expressed as: N, P_2O_5 and K_2O
Total N Organic N: 1/10 of the declared value P_2O_5	1.1 1.1

K_2O	1.1
b) Sum of the negative deviations from the declared values:	
If N total + P_2O5 + K_2O > 15 % If N total + P_2O5 + K_2O ≤ 15 %	1.9 1.5
c) Organic matter	
The permitted tolerance shall be 1/10 of the declared value for granular fertilisers and 1/8 of the declared value for pulverised fertilisers and liquid fertilisers.	

2. Mineral soil improvers

2.1. Liming materials

	Neutralising value
Improvers based on calcified algae	3
Lime sludge-based improvers	3

3. Organic soil improvers

	Margins of tolerance
Organic matter	20 % of the declared value, with a maximum of 6 % in absolute value
C/N Ratio	10 % of the declared value, with a maximum of 2 % in absolute value
Total nitrogen	15 % of the declared value, with a maximum of 0.9 % in absolute value
Total phosphorus (P_2O_5)	15 % of the declared value, with a maximum of 0.9 % in absolute value
Total Potassium (K_2O)	15 % of the declared value, with a maximum of 0.9 % in absolute value
pH	± 0.5 of the declared value
Electrical conductivity	15 % of the declared value

4. Other soil improvers

	Margins of tolerance
Water retention capacity	10 % of the declared value
Organic matter	10 % of the declared value

5. Other fertilisers and special products

For ‘EC fertilisers’ and the fertilisers listed in Group 1 of Annex I, to which special products (amino acids, humic acids, 3,4-dimethylpyrazole phosphate (DMPP)) are added, the tolerance margins are the same as those required for those products.

a) Total free amino acids	Margins of tolerance
Declared value ≥ 10 % Declared value < 10 % For each of the free amino acids declared in the aminogram	1 % in absolute value 10 % of the declared value 25 % of the declared value
b) Humic and fulvic acids	
Humic acids Fulvic acids Humic compounds	15 % of the declared value, with a maximum of 2 % in absolute value 15 % of the declared value, with a maximum of 2 % in absolute value 15 % of the declared value, with a maximum of 3 % in absolute value
c) Nitrification inhibitors	
DMPP (3,4 –dimethylpyrazole phosphate)	10 % of the declared value, in relation to the percentage of nitrogen inhibitor in nitrifiable form (ammoniacal or urea)

6. Fertilisers which supply micronutrients

The tolerances for declared micronutrient content (boron, cobalt, copper, iron, manganese, molybdenum and zinc) are 0.4 % in absolute value for contents exceeding 2 % and 1/5 of the declared value for contents equal to or lower than 2 %.

Note. In relation to the declared content for the different forms of nitrogen and different solubilities of phosphorus (expressed as P_2O_5), the tolerances allowed are 1/10 of the overall content of the nutrient in question with a maximum of 2 % by mass, provided the nutrient content remains within the limits specified in Annex I to this Ordinance and the tolerances specified in point 1 of this Annex.

ANNEX IV

Waste which may be used for the production of the types of fertilising materials in Groups 2, 3 and 5 (referred to in Articles 4 and 5)

In accordance with Commission Decision 2014/955/EU of 18 December, amending Commission Decision 2000/532/EC of 3 May, which publishes the European Waste List.

CODE	WASTE
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AS WELL AS FISHING, FOOD PREPARATION AND PROCESSING
02 01	Waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	Sludges from washing and cleaning
02 01 02	Animal-tissue waste
02 01 03	Plant tissue waste
02 01 06	Animal faeces, urine and manure (including spoiled litter), effluent, collected separately and treated off-site
02 01 07	Wastes from forestry
02 01 99	Wastes with no other specifications (only: impoverished and sanitised substrate after mushroom cultivation)
02 02	Wastes from the preparation and processing of meat, fish and other foodstuffs of animal origin
02 02 01	Sludges from washing and cleaning
02 02 02	Animal-tissue waste
02 02 03	Materials unsuitable for consumption or processing
02 02 04	Sludges from on-site effluent treatment
02 03	Wastes from the preparation and processing of fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco; wastes from the production of preserves; waste from the production of yeast and yeast extract, and from the preparation and fermentation of molasses.
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation
02 03 04	Materials unsuitable for consumption or processing
02 03 05	Sludges from on-site effluent treatment
02 04	Wastes from sugar processing
02 04 02	Off-specification calcium carbonate

02 04 03	Sludges from on-site effluent treatment
02 05	Wastes from the dairy sector
02 05 01	Materials unsuitable for consumption or processing
02 05 02	Sludges from on-site effluent treatment
02 06	Waste from the baking and confectionery industry
02 06 01	Materials unsuitable for consumption or processing
02 06 03	Sludges from on-site effluent treatment
02 07	Waste from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	Wastes from spirit distillation
02 07 04	Materials unsuitable for consumption or processing
02 07 05	Sludges from on-site effluent treatment
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	Wastes from wood processing and the production of panels and furniture
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, planer shavings, wood, particle board and veneers, other than those referred to in 03 01 04
03 03	Waste from pulp, paper and cardboard production and processing
03 03 01	Waste bark and wood
03 03 07	Mechanically-separated rejects from pulping of waste paper and cardboard
03 03 08	Wastes from the sorting of paper and cardboard for recycling
03 03 10	Reject fibres and fibre sludge, fillers and coatings, originating from mechanical separation
03 03 11	Sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	LEATHER, FUR AND TEXTILE INDUSTRY WASTES
04 01	Waste from leather and fur industry
04 01 01	Fleshings and lime split waste
04 01 07	Sludges, in particular from on-site effluent treatment free of chromium

04 01 99	Wastes with no other specifications (only: wastes from tanned leather free of chromium)
04 02	Waste from textile industry
04 02 10	Organic matter from natural products [only: *Vermicelle* (dried and ground rabbit skin)]
04 02 20	Sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	Waste from unprocessed textile fibres
10	WASTES FROM THERMAL PROCESSES
10 01	Wastes from power stations and other combustion plants (except 19)
10 01 01	Bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	Fly ash from coal
10 01 03	Fly ash from peat and untreated wood
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING WITH NO OTHER SPECIFICATIONS
15 01	Packaging (including separately collected municipal packaging waste)
15 01 01	Paper and cardboard packaging
15 01 03	Wooden packaging
19	WASTES FROM WASTE MANAGEMENT FACILITIES, *EX SITU* OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL CONSUMPTION
19 05	Waste from aerobic treatment of solid waste
19 05 01	Non-composted fraction of municipal and similar waste
19 05 02	Non-composted fraction of animal and vegetable waste
19 05 03	Off-specification compost
19 06	Waste from anaerobic treatment of waste
19 06 03	Liquor from anaerobic treatment of municipal waste
19 06 04	Digestate from anaerobic treatment of municipal waste
19 06 05	Liquor from anaerobic treatment of animal and vegetable waste
19 06 06	Sediment from the anaerobic treatment of plant and animal wastes
19 08	Wastes from wastewater treatment plants with no other specifications
19 08 05	Sludges from treatment of urban waste water
19 08 12	Sludges from biological treatment of industrial waste water other than those

	mentioned in 19 08 11
19 08 14	Sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	Wastes from the preparation of water for human consumption and water for industrial consumption
19 09 02	Sludges from water clarification
19 09 04	Spent activated carbon
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) with no other specifications
19 12 01	Paper and cardboard
19 12 07	Wood other than that mentioned in 19 12 06
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 including only biodegradable wastes
20	MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTE) INCLUDING SEPARATELY COLLECTED WASTE
20 01	Separately collected fractions (except 15 01)
20 01 01	Paper and cardboard (provided its recycling is not feasible)
20 01 08	Biodegradable kitchen and canteen waste
20 01 25	Cooking oil and fat
20 01 38	Wood other than that mentioned in 20 01 37
20 02	Garden and park waste (including cemetery waste)
20 02 01	Biodegradable waste
20 03	Other municipal waste
20 03 01	Mixed municipal and similar waste
20 03 02	Waste from markets

ANNEX V

Methods of sampling and analysis (referred to in Article 11)

This Annex lays down the reference methods of sampling and analysis for the fertilising materials in the groups set out in Annex I to this Ordinance (Group 1 - National inorganic fertilisers; Group 2 - Organic fertilisers; Group 3 - Organo-mineral fertilisers; Group 4 - Mineral soil improvers; Group 5 - Organic soil improvers; Group 6 - Other soil improvers and Group 7 - Other fertilisers and special products).

It also sets out the frequency of the tests on the basis of production for fertilising materials included in Group 5.

Table 1 – Reference methods to be adopted when determining the values of the fertilising materials' characteristics in the groups listed in Annex I to this Ordinance.

Parameter	Group/Reference method
Sampling test	Groups 3, 4, 6 and 7 - NP 2161, NP 1606 as regards the sampling of fluid fertilisers.
	Groups 1, 3, 4, 6 and 7 - NP EN 1482 – 1, NP EN 1482-3
	Groups 2, 5, 6 and 7 – NP EN 12579
Preparation of the sample	Groups 1, 3, 4, 6 and 7 – NP EN 1482 – 2
	Groups 2 and 5 - NP EN 13040
Lignosulfonic acid	Group 1 – NP EN16109
Heptogluconic acid	Group 1 – NP EN 16847
Moisture	Groups 2, 3, 5, 6 and 7 – NP EN 13040 Groups 1 and 4 – NP EN 12048 and NP EN 12049 Results expressed as %
Apparent density	Groups 2, 3, 5, 6 and 7 – NP EN 12580 or NP EN 15238 Results expressed as g L-1 (original matter)
pH (H_2O)	Groups 2, 3, 5, 6 and 7 – NP EN 13037 Results expressed as the original matter

Electrical conductivity	Groups 2, 3, 5, 6 and 7 – NP EN 13038 Results expressed as mS cm-1 (original matter)
Nitric nitrogen	Groups 1, 3, 6 and 7 – NP EN 15476 and NP EN 15475 Results expressed as % by mass in the original matter
	Groups 2, 3 and 5 – NP EN 13652 Results expressed as mg l-1 in the original matter
Ammoniacal nitrogen	Groups 1, 3 and 7 – EN 15475 or EN 15604 Results expressed as % by mass in the original matter
	Groups 2, 3 and 5 – EN 13652 or EN 15604 Results expressed as mg l-1 in the original matter
Cyanamide nitrogen	Groups 1, 3 and 7 – NP EN 15562 Results expressed as % by mass in the original matter
Urea nitrogen	Groups 1, 3, 6 and 7 – NP EN 15604 Results expressed as % by mass in the original matter
Organic nitrogen	Groups 2, 3, 6 and 7 - Calculated by the difference between total nitrogen and the different forms of nitrogen present.
Total nitrogen	Group 1 – NP EN 15560 - in nitrate-free calcium cyanamide Results expressed as % by mass in the original matter
	Group 1 – NP EN 15561 - in calcium cyanamide containing nitrates Results expressed as % by mass in the original matter
	Group 1 and 6 - NP EN 15478 - in urea Results expressed as % by mass in the original matter
	Groups 1, 3, 6 and 7 - NP EN 15604 – in fertilisers containing nitric, ammoniacal, urea and cyanamide nitrogen Results expressed as % by mass in the original matter
	Groups 1, 3, 6 and 7 - NP EN 15750 - in fertilisers containing nitric, ammoniacal and urea nitrogen Results expressed as % by mass in the original matter
	Groups 2, 5 and 7 – NP EN 13654-1 or EN 13654-2 Results expressed as mass/mass or mass/volume in dry matter Group 5 – NP EN 16168 Results expressed as % (dry matter)
Biuret in urea	Groups 1, 3 and 7 – NP EN 15479 Groups 2 and 3 - ISO 18643

	Results expressed as % by mass in the original matter
Water-soluble phosphorus (extraction)	Groups 1, 3 and 7 – NP EN 15958
Phosphorus soluble in neutral ammonium citrate (extraction)	Groups 1, 3 and 7 – NP EN 15957
Phosphorus soluble in 2 % citric acid (extraction)	Groups 1, 3 and 7 – NP EN 15920
Phosphorus soluble in 2 % formic acid (extraction)	Groups 1, 3 and 7 – NP EN 15919
Phosphorus soluble in mineral acids (extraction)	Groups 1, 3 and 7 – NP EN 15956
'Total' phosphorus (extraction)	Group 2 – NP EN 13650
Phosphorus (determination)	Groups 1, 3 and 7 – NP EN 15959 Results expressed as % by mass in the original matter Group 2 and 5 – NP EN ISO 22036 Results expressed as mg kg^{-1} (dry matter)
Water-soluble potassium	Groups 1, 3 and 7 – NP EN 15477 Results expressed as % by mass in the original matter
Potassium soluble in hydrochloric acid (extraction)	Groups 1, 3 and 7 - NP 3046
Potassium soluble in hydrochloric acid (determination)	Groups 1, 3 and 7 - NP 3045 and NP EN ISO 11885 Results expressed as % by mass in the original matter
'Total' potassium (extraction)	Groups 2, 3, 5 and 7 – NP EN 13650 Groups 2, 3 and 5 – NP EN ISO 54321
Potassium (determination)	Groups 2, 3, 5 and 7 – NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 Results expressed as % (dry matter)
Total calcium, total magnesium, total sodium and total sulphur in the form of sulphates in the fertilisers (extraction)	Groups 1, 3 and 7 – NP EN 15960
Water-soluble calcium, magnesium, sodium and sulphur (present in the form of sulphates) in the fertilisers (extraction)	Groups 1, 3 and 7 – NP EN 15961

Water-soluble sulphur where the sulphur is in various forms in the fertilisers (extraction)	Groups 1, 3 and 7 – NP EN 15926
'Total' calcium (extraction)	Groups 2, 3, 5 and 7 – NP EN 13650 Groups 2, 3 and 5 – NP EN ISO 54321
Calcium (determination)	Groups 1, 3 and 7 – NP EN 16196 Results expressed as % by mass in the original matter
	Groups 2, 3, 5 and 7 – NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 Results expressed as % by mass in dry matter
Total calcium	Group 4 – NP EN 13475 Results expressed as % by mass in the original matter
Calcium and magnesium (extraction)	Group 4 – NF U44-140
Calcium and magnesium (determination)	Group 4 – NP EN 12946 Results expressed as % by mass in the original matter
'Total' magnesium (extraction)	Groups 2, 3 and 5 – NP EN ISO 54321 Groups 2, 3, 5 and 7 - EN 13650
Magnesium (determination)	Groups 1, 3 and 7 – NP EN 16197 Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 16198 Results expressed as % by mass in the original matter
	Groups 2, 3, 5 and 7 – NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 Results expressed as % by mass in dry matter
Total magnesium	Group 4 – NP EN 12947 Results expressed as % by mass in the original matter
Sodium (determination)	Groups 1 and 3 - NP EN 16199 Results expressed as % by mass in the original matter
Elemental sulphur	Groups 1 and 3 - NP EN 16032 Results expressed as % by mass in the original matter
Chlorine from chlorides	Group 1 – NP EN 16195 Results expressed as % by mass in the original matter
	Groups 3, 4 and 7 – NF U42-371
Total boron and water-	Groups 1 and 3 – NP EN 16964 and NP EN 16962

soluble boron (extraction)	
Total cobalt, water-soluble cobalt (extraction)	
Total copper, water-soluble copper (extraction)	
Total iron, water-soluble iron (extraction)	
Total manganese, water-soluble manganese (extraction)	
Total molybdenum, water-soluble molybdenum (extraction)	
Total zinc, water-soluble zinc (extraction)	
Total boron and water-soluble boron (determination)	Groups 1 and 3 – NP EN 16963 or NP EN 16965 Results expressed as % by mass in the original matter
Total cobalt, water-soluble cobalt and chelated or complexed cobalt (determination)	Groups 1 and 3 – NP EN 16963 or NP EN 16965 Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 15962 Results expressed as % by mass in the original matter
Total copper, water-soluble copper and chelated or complexed copper (determination)	Groups 1 and 3 – NP EN 16963 or NP EN 16965 Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 15962 Results expressed as % by mass in the original matter
Total iron, water-soluble iron and chelated or complexed iron (determination)	Groups 1 and 3 – NP EN 16963 or NP EN 16965 Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 15962 Results expressed as % by mass in the original matter
Total manganese, water-soluble manganese and chelated or complexed manganese (determination)	Groups 1 and 3 – NP EN 16963 or NP EN 16965 Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 15962 Results expressed as % by mass in the original matter
Total molybdenum,	Groups 1 and 3 - NP EN 16963

water-soluble molybdenum and chelated or complexed molybdenum (determination)	Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 15962 Results expressed as % by mass in the original matter
Total zinc, water-soluble zinc and chelated or complexed zinc (determination)	Groups 1 and 3 – NP EN 16963 or NP EN 16965 Results expressed as % by mass in the original matter
	Groups 1 and 3 - NP EN 15962
Neutralising value	Group 4 – NP EN 12945 Results expressed as the original matter
Particle size	Group 3 – Fraction < 1 mm: Weigh 1 kg of original sample and sieve using a sieve of 20 mm and weigh the materials separated by sieving. Results expressed as % in the original matter
	Group 7 – NP EN 12948 or NP EN 1235 Method A: Results expressed as % in the original matter Method B: Results expressed as % in dry matter NP EN 1235: Results expressed as % in the original matter
	Group 5 – Fraction < 20 mm: Weigh 1 kg of original sample and sieve using a sieve of 20 mm and weigh the materials separated by sieving. Results expressed as % (original matter)
	Groups 2 and 5 – Fraction < 10 mm: Weigh 1 kg of original sample and sieve using a sieve of 10 mm and weigh the materials separated by sieving. Results expressed as % (original matter)
	Groups 3 and 5 – Fraction < 5 mm: Weigh 1 kg of original sample and sieve using a sieve of 5 mm and weigh the materials separated by sieving. Results expressed as % (original matter)
Water absorption capacity	Groups 6 and 7 – DIN 18132
Reactivity for carbonate and silicate liming materials	Group 4 – NP EN 13971 Results expressed as % (original matter)
Reactivity for carbonate liming materials	Group 4 – NP EN 16357
Organic matter	Groups 3, 6 and 7 - Calculated from the loss of mass due to calcination, after the value of the water content has been deducted, determined by method 2.013-AOAC, 14th edition, 1984, (except for calcium nitrate where the xylol method shall be used) and the content of ammoniacal nitrogen calculated in ammonium sulphate and/or the content of amidic nitrogen

	calculated in urea. Results expressed as % by mass in dry matter
	Group 5 – NP EN 15935 Results expressed as % by mass in dry matter
	Groups 2, 3, 5, 6 and 7 – NP EN 13039 Results expressed as % by mass in dry matter
Total organic carbon	Groups 5 and 7 - NP EN 15936 Results expressed as % by mass in dry matter
	Groups 5, 6 and 7 - Calculation: Organic matter content / 1.8 Results expressed as % by mass in dry matter
'Total' arsenic, cadmium, cobalt, chromium, copper, iron, molybdenum, nickel, manganese, lead and zinc (extraction/determination)	Groups 2, 3, 5 and 7 – NP EN 13650/ NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 Groups 2, 3 and 5 – NP EN ISO 54321 / NP EN ISO 22036 or NP EN ISO 16965 or ISO 11885 or NP EN 13650 Results expressed as mg kg^{-1} (dry matter)
'Total' boron (B) and phosphorus (P_2O_5) (extraction/ determination)	Group 7 – NP EN 13650/NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 or by UV/VIS EAM Groups 2, 3 and 5 – NP EN ISO 54321 / NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 or EAM UV/VIS Results expressed as mg kg^{-1} (dry matter)
	Groups 2, 3, 5 and 7 - Incineration at (450 ± 10) ºC and digestion with a hydrochloric solution of the ash / NP EN ISO 22036 or NP EN ISO 16965 or NP EN ISO 11885 or NP EN 13650 (Annex B) or by EAM UV/VIS Results expressed as mg kg^{-1} (dry matter)
Total sulphur (extraction/determination)	Groups 1, 3 and 7 — NP EN 15925/NP EN 15749 or NP EN ISO 11885 Groups 2 and 5 – NP EN 15925 or by means of hydrochloric acid / NP EN 15749 or NP EN ISO 11885 Results expressed as mg kg^{-1} (dry matter)
'Total' mercury	Groups 2, 3, 5 and 7 – NP EN 13650 Results expressed as mg kg^{-1} (dry matter)
	Groups 2, 3, 5 and 7 - NP EN ISO 54321 Groups 2, 3, 5 and 7 – NP EN 16320 Results expressed as mg kg^{-1} (dry matter)
	Groups 2, 3, 5 and 7 - EPA Method 7473 - Thermal decomposition, amalgam formation and quantification of Hg

	vapour in AAS without a flame Results expressed as mg kg^{-1} (dry matter)
Salmonella spp.	Group 5 – NP EN ISO 6579-1 Group 7 – NP EN 17717 Results expressed as fresh matter
Escherichia coli	Group 5 - ISO 16649-2 (1) Results expressed as number of viable cells/g (fresh matter)
	Group 5 – NP EN ISO 16649-3 (1) Results expressed as number of viable cells/g (fresh matter)
	Groups 5 – NP EN ISO 9308-2 (1) Results expressed as number of viable cells/g (fresh matter)
Degree of maturity (self-heating test)	Group 5 – NP EN 16087-2 Results expressed as ºC
	Group 5 - Methodology proposed in *Gütesicherung Kompost RAL-GZ 251* (2006) Results expressed as degree of maturity (I to V)
	Group 5 - Methodology proposed in *Methods book for the analysis of compost* (1994) Federal Compost Quality Assurance Organization, pp. 16-19' Results expressed as degree of maturity (I to V)
Anthropogenic inert matter and stones	Group 5 – CEN/TS 16202 Group 5 - Methodology proposed in *Methods book for the analysis of compost* (1994) Federal Compost Quality Assurance Organisation, pp. 41-43' Results expressed as % or in cm^2 g^{-1}, in the case of plastic (dry matter)
Phytotoxicity	Group 5 – NP EN 16086-1 Group 5 – NP EN 16086-2, NP EN ISO 11269-2, ISO 17126 Group 5 - Methodology proposed by Zucconi, F., Pera, A., Forte, M. and de Bertoldi, M. (1981). Evaluating toxicity of inmature compost. *BioCycle,* 22, 54-57» Results expressed as % of germination
Weed seeds and propagules	Group 5 – CEN/TS 16201 Group 5 - ONORM S 2021 in *Growing media quality requirements and test methods* (Austrian Standards Institute) Results expressed as number of plants/L of original matter
Humic acids	Groups 3, 5 and 7 - ISO 19822 or extraction with sodium

Fulvic acids	pyrophosphate or sodium hydroxide and determination by AMI UV/VIS Results expressed as m/m in dry matter
Humic compounds	
3,4 –dimethylpyrazole phosphate (DMPP)	Group 7 – NP EN 15905
Nitrogen fixing bacteria	Group 7 - 'Plate count' Methodology proposed by Vincent, J.M. *(1979). A Manual for the practical study of root – nodule bacteria. Cap.3 "Counts of viable rhizobia", pp. 54-58»* Results expressed as CFU/ml or g of original matter
	Group 7 - *Counting rhizobia by a plant infection method* in Somasegaran, P. and Hoben, H.J. *(1994) Handbook for rhizobia. Cap.6 "Counting rhizobia by a plant infection method", pp. 58-64»* Results expressed as number of bacterial CFU per ml or g of original matter
Phosphorus solubilising bacteria	Group 7 – Plate count using a selective culture medium containing insoluble phosphate and quantification of CFU with a solubilisation halo, in accordance with the methodologies described in Pikovskaya, R. I. (1948) Mobilization of phosphorus in soil in connection with the vital activity of some microbial species, Microbiologiya 17, 362–370; ou Nautiyal, C. S. (1999) An efficient microbiological growth medium for screening phosphate-solubilizing microorganisms, FEMS Microbiology Letters 170(1), 265–270. Results expressed as CFU/ml or g of original matter
Formaldehyde	Group 6 - Extraction in water and determination by photometric method
AOX (adsorbable organic halogen compounds or adsorbable organic halides)	Group 5 – NP EN 16166
LAS (linear alkylbenzene sulphonates)	Group 5 – CEN/TS 16189
DEHP di (2-ethylhexyl) phthalate	Group 5 – CEN/TS 16183
NPE (nonylphenols and nonylphenol ethoxylates)	Group 5 – CEN/TS 16182
PAH (polycyclic aromatic hydrocarbons)	Group 5 – ISO 13859
PCB (polychlorinated biphenyls)	Group 5 – ISO 13876
Dioxins and Furans: PCDD (polychlorinated dibenzo-p-dioxins) and PCDF (polychlorinated	Group 5 – EN 16190

dibenzofurans)	
Mycorrhizal colonisation – mycorrhization efficiency	Group 7 - Method of McGonigle et al. (1990). Described in T.P. McGonigle, M.H. Miller, D.G. Evans, G.L. Fairchild and J.A. Swan. (1990). *A new method which gives an objective measure of colonization of roots by vesicular-arbuscular mycorrhizal fungi*. *New Phytologist*, 115: 495 - 501.
Mycorrhizal colonisation - taxonomic identification of species of Arbuscular mycorrhizal fungi (AMF)	Group 7 – Molecular methods based on PCR with methodology described in: Krüger, M., Stockinger, H., Krüger, C. and Schüßler, A. (2009). DNA-based species level detection of Glomeromycota: one PCR primer set for all arbuscular mycorrhizal fungi. New Phytologist, 183(1): 212–223. https://doi.org/10.1111/j.1469-8137.2009.02835.x Lee, J., Sangsun L. and Young, J.P.W. (2008). Improved PCR primers for the detection and identification of arbuscular mycorrhizal fungi. FEMS Microbiology Ecology, 65(2): 339–349. https://doi.org/10.1111/j.1574-6941.2008.00531.x
Mycorrhizal colonisation – viability and quantification of the inoculum	Group 7 – Methods of extraction and quantification of viable spores with methodology described in: Schalamuk, S. and Cabello, M. (2010). Arbuscular mycorrhizal fungal propagules from tillage and management systems in agroecosystems: possible effects on Glomeromycota diversity Mycologia, 102(3): 624–634. https://doi.org/10.3852/08-118 Boyno, G. et al. (2023). A new technique for the extraction of arbuscular mycorrhizae fungal spores from rhizosphere. Journal of Fungi, 9(8): 845. https://doi.org/10.3390/jof9080845
Free amino acids	Group 7 – Determination by HPLC

(1) A minimum initial dose of 20 g of fresh matter is recommended, dilution 1:5 or 1:10 in sterile solution of NaCl 0.9 % and stirring at 150 rpm, at 5 ± 3 ºC, for as long as necessary to obtain the maximum possible homogeneity.

ICP – plasma emission spectrophotometry

AAS – flame atomic absorption spectrophotometry

EAM UV/VIS – UV/visible molecular absorption spectrophotometry

FP – Flame photometry

In the case of the alternative methods referred to in Article 16(2)(b) Decree-Law No 30/2022, of 11 April, an equivalent method is understood to be one that has the same area of application (parameter and matrices) and which complies with the performance characteristics of the method, achieving comparable results to standardised methods. Performance

characteristics include, for example, repeatability, reproducibility, accuracy, detection or quantification limits, and sensitivity, as applicable.

The tests to be carried out on fertilising materials in Group 5 shall cover the following parameters:

a) Agronomic: moisture, organic matter, total carbon, density, pH, electrical conductivity, total nitrogen, 'total' phosphorus, 'total' potassium, 'total' calcium, 'total' magnesium, 'total' boron, total carbon/total nitrogen ratio;

b) Heavy metals: 'total' cadmium, chromium, copper, nickel, lead, mercury and zinc;

c) Microbiological: *Salmonella* spp. and *Escherichia coli*;

d) Degree of maturity (self-heating test) and phytotoxicity;

e) Particle size;

f) Anthropogenic inert matter and stones;

g) Weed seeds and propagules;

h) Organic, dioxin and furan compounds.

The values of the parameters listed in the preceding subparagraphs, to be indicated on the label and accompanying documents, with the exception of *Salmonella* spp. in point (c) and point (d) and (f), shall be calculated by the arithmetic mean of the results obtained in the tests carried out throughout the year preceding the date of preparation of the label or accompanying document. These are updated every two years, and must list the values of the parameters relating to the year prior to the update.

The frequency of the tests to be carried out on the fertilising materials included in Group 5 depends on the quantity of fertilising materials produced annually (Table 2).

Table 2 – Frequency of the tests according to the production of fertilising materials in Group 5.

Production of fertilising materials (tonnes per year)	Frequency of the tests	Total / year
> 3000	Every 2 months	6
	Every 4 months for the parameters in which there is a relative standard deviation of less than 20 % in the results obtained throughout the year	3
≤ 3000 and > 1000	1 test (for each 1000 t of fertilising materials)	a minimum of 2
≤ 1000	-	a minimum of 2

ANNEX VI

Identification markings and labelling (referred to in Article 12)

The labels and accompanying documents of non-harmonised fertilising materials must be written entirely in Portuguese, except for the trade name and holder's name.

Information relating to the product which is permitted on the labels and accompanying documents of non-harmonised materials is as follows:

- A) Compulsory identification and markings;

- B) Optional identification and markings.

All compulsory and optional markings must be clearly separated from any other information on the labels, packages and accompanying documents.

In label preparation, the font type and size should allow the text to be read easily.

A) Compulsory identification and markings

1. Type designation

a) The designation of the group, as set out in Annex I, in block capitals;

b) The name of the fertilising materials, in block capitals, in accordance with column 2 of the tables in Annex I to this Ordinance;

c) For blended products, the word ‘blended’ after the type designation;

d) The chemical symbols of the primary nutrients shall be added to the type designation, followed, in brackets, by the symbols of the declared secondary macronutrients;

e) Where micronutrients are declared, the words “with

micronutrients” or “with” followed by the name or names and chemical symbols of the micronutrients present shall be given;

f) For the type designation, only the letters indicating the content of the primary macronutrients and secondary micronutrients may be included. The numbers indicating the primary macronutrient content, in the order established by the said designation, refer to the overall content of each of the forms and solubilities according to each type of product (columns 5 and 6 of the tables of Annex I to this Ordinance). The declared content of the secondary macronutrients shall be indicated between brackets after the content of the primary nutrients.

g) Where it is indicated in the specific directions that the product may be used for fertigation, the words ‘Water-soluble fertiliser’ shall be mentioned;

Example: NPK organo-mineral fertiliser, a solid product which contains the following:

- 25 % organic matter;

- 7 % total nitrogen (N), 5 % organic nitrogen (N), 2 % ammoniacal nitrogen (N);

- 10 % phosphorus pentoxide (P_2O_5) soluble in neutral ammonium citrate and in water;

- 7 % water-soluble potassium oxide (K_2O);

- 3 % water-soluble calcium oxide (CaO);

- 2.4 % total magnesium oxide (MgO);

- 0.1 % total iron (Fe); 0.02 % total zinc (Zn).

The name shall be:

NPK ORGANO-MINERAL FERTILISER (Ca - Mg) 7-10-7 (3 – 2,4) with iron (Fe) and zinc (Zn)

2. Contents

The nutrient content must be declared and guaranteed, in the forms and solubilities referred to in column 6 in the tables in Annex I to this Ordinance. Nutrients shall be indicated both in words and by the appropriate chemical symbol.

2.1. Expression of primary macronutrients:

a) The nitrogen, phosphorus and potassium content shall be expressed as follows:

i) Nitrogen solely in elemental form (N);

ii) Phosphorus solely in phosphorus pentoxide form (P_2O_5);

iii) Potassium solely in potassium oxide form (K_2O);

b) The declared content of primary macronutrients shall be given as a percentage by mass, as whole numbers or, where necessary, to one decimal place, where there is an appropriate method of analysis;

c) The primary macronutrients, except where the type designations in Annex I to this Ordinance provide otherwise, shall also be expressed as follows:

i) Nitrogen (N), in the following forms: nitric, ammoniacal, urea and organic;

ii) Phosphorus pentoxide (P_2O5), in both solubilities: water-soluble and soluble in water and in neutral ammonium citrate;

iii) Water-soluble potassium oxide (K_2O).

2.2. Expression of secondary macronutrients:

a) The fertilising materials listed in Annex I to this Ordinance which

contain secondary macronutrients, shall declare their sodium content where the sodium oxide (Na2O) content exceeds 3 %;

b) The fertilising materials listed in Annex I which contain secondary macronutrients, shall declare their calcium, magnesium and sulphur content, provided these elements are present in at least the following minimum quantities, except where in the specific requirements for the type, other values are expressed:

i) 2 % calcium oxide (CaO);

ii) 2 % magnesium oxide (MgO);

iii) 5 % sulphur trioxide (SO_3).

a) The calcium, magnesium, sodium and sulphur content is solely expressed as oxide form (CaO, MgO, Na_2O and SO_3);

b) The contents of these nutrients shall be declared as a percentage by mass, as a whole number or, where necessary, to 1 decimal place, where there is an appropriate method of analysis;

c) The declaration of the magnesium, sodium and sulphur content in fertiliser products shall be expressed as one of the following ways:

i) Total content;

ii) Total content and the water-soluble content where the soluble content is at least a quarter of the total content;

iii) Where an element is totally soluble in water, only the water-soluble content shall be declared.

a) As regards the calcium content, only the percentage that is water-soluble shall be declared, unless otherwise stated in the type designation in Annex I to this Ordinance.

2.3. Expression of micronutrients:

a) Only the micronutrient content of boron (B), cobalt (Co), copper

(Cu), iron (Fe), manganese (Mn), molybdenum (Mo) and zinc (Zn) in fertilisers where the product satisfies the requirements set out in the corresponding group in Annex I to this Ordinance shall be declared which, in the case of mineral, organic and organo-mineral fertilisers and other fertilisers and special products, are set out in point 8 of the same Annex;

b) The micronutrient content shall be declared in the following manner:

i) In the case of inorganic fertilisers which only declare one micronutrient, as prescribed in column 6;

ii) In the case of solid or liquid mixtures of micronutrients containing at least two micronutrients, and in the case of products which belong to the types referred to Group 1 of Annex I, the following shall be indicated:

- The total content;

- The water-soluble content, where the solubility is at least half of the total content;

- Where a micronutrient is totally water-soluble, only the water-soluble content shall be declared.

c) Micronutrients contained in the fertilising materials should be listed in alphabetical order of their chemical symbols: B, Co, Cu, Fe, Mn, Mo, Zn;

d) For products listed in point 1.2. of Annex I, the following wording shall appear immediately after the compulsory or optional markings: 'To be used only where there is a recognised need. Do not exceed the appropriate doses.'

3. Other contents and characteristics:

a) In liquid products, the nutrient content shall be expressed as a

percentage by mass and may include the equivalent by mass in relation to the volume (kilograms per hectolitre or grams per litre);

b) Where fertilising materials have been prepared with raw materials of organic origin, the raw materials involved in their production shall be declared with the percentage by mass that corresponds to each of them;

c) Declare parameters such as: organic matter; humic acids; amino acids; moisture; total carbon; pH; electrical conductivity; total nitrogen; total phosphorus; total potassium; total calcium; total magnesium; total boron; carbon/nitrogen ratio; particle size; total heavy metals (cadmium, lead, copper, chromium, mercury, nickel and zinc); organic compounds, dioxins and furans; anthropogenic inert materials and stones; microorganisms; weed seeds and propagules;

d) For fertilising materials with organic components which belong to Group 5, the corresponding class should be indicated, where appropriate, in accordance with Annex II to this Ordinance and state: 'Heavy metal content less than or equal to the maximum permissible values for this classification';

e) For fertilising materials which belong to Group 5, indicate the category of maturation as set out in Annex II to this Ordinance;

f) For fertilising materials which belong to Group 5, indicate the use set out in the respective class (Annex II to this Ordinance):

i) Classes I and II: 'For agricultural use';

ii) Class IIA: 'For use only on tree and bush crops, namely orchards, olive groves and vineyards, and forest species';

iii) Class III: 'For use on soil where it is not intended to produce crops for human food and animal feed'.

g) For fertilising materials which belong to Group 5, indicate the maximum quantities of fertilising material to be applied to the soil, according to the class as set out in Annex II to this Ordinance;

h) For fertilising materials falling under the category 'Processed Insect Excreta (frass)', the following statement must be included: 'Processed frass may have the potential to cause sensitising reactions';

i) For fertilising material containing organic constituents of animal origin, the following statement must be included 'Do not allow grazing or use of crops as fodder for at least 21 days after application';

j) Where the product contains free amino acids, the production process followed to obtain them should be included:

i) In hydrolysates, the raw material that is hydrolysed;

ii) In fermentation plants, the micro-organism(s) used;

iii) In synthesis, the method used.

4. Conditions for application:

Indicate the crops and doses for which the fertilising material is to be used, application instructions and the special conditions of use, where appropriate.

In the particular case of organic soil improvers, it is compulsory to refer to the fact that their application depends on the characteristics of the soil's fertility, evaluated by analysis of the soil or field where the application is intended to be carried out (information contained in points 7, 12, 13 and 14 of Annex II to this Ordinance). The soil analysis should always be carried out before any application and should include, among other analyses, the determination of organic matter, heavy metals and the pH.

5. Other details

a) Indicate the form of presentation: liquid, granules, powder or pellets;

b) For fluid fertilising materials, appropriate instructions regarding storage temperature.

c) Indicate the quantity expressed by net or gross mass (kilograms). If the gross mass is given, the tare mass must be indicated. In the case of fluid products, the quantity may be expressed by volume (litres) in addition to the mass;

d) Registration number in the Register of Non-Harmonised Fertilising Materials;

e) The economic operator’s name or company name and address responsible for placing fertilising materials on the market;

f) The name or company name and the address of the manufacturer of the fertilising materials;

g) Identification of the batch number to ensure traceability, in accordance with the provision set out in Article 17 of Decree-Law No 30/2022, of 11 April;

h) The shelf life from the date of manufacture under normal storage conditions.

B) Optional identification and markings

The packages, labels and accompanying documents may contain the following markings:

a) The trade name of the fertilising material, in which abbreviations or expressions liable to mislead as to the type or content of the product may not be used, nor any reference to organic production

without validation by the Directorate-General for Agriculture and Rural Development (DGADR).

The permitted claims regarding use in organic production are:

i) Suitable for organic farming;

ii) Approved for organic farming.

b) Where there are the optional markings described in Annex I to this Ordinance, as specified therein;

c) The content of water-soluble P_2O_5 in phosphate products in Group 3 (organo-mineral fertilisers), except for products in solution where it is compulsory.

d) The micronutrient content where normal ingredients of raw materials intended to supply primary and secondary macronutrients, whenever they are present in quantities equal to or greater than the minimum contents set out in the table in point 8 of Annex I to this Ordinance;

e) Specific instructions relating to storage conditions and handling for solid products;

f) The words ‘low in chlorine’ may only be included when the chlorine content is less than 2 %. The words ‘chlorine free’ may only be included when the chlorine content is less than 0.3 %.