International Standard 7409

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Fertilizers — Marking — Presentation and declarations

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7409 was developed by Technical Committee ISO/TC 134, *Fertilizers and soil conditioners*, and was circulated to the member bodies in November 1981.

It has been approved by the member bodies of the following countries:

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The member bodies of the following countries expressed disapproval of the document on technical grounds:

Chile
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INTERNATIONAL STANDARD ISO 7409-1984 (E)

Fertilizers — Marking — Presentation and declarations

1 Scope and field of application

This International Standard specifies the procedure for marking containers or labels for fertilizers, where national legislation permits.

It is applicable to all fertilizers in containers.

NOTES

1 The spelling "fertiliser" is recognized but the spelling "fertilizer" is preferred and is used throughout.

2 Attention is drawn to ISO 8157, *Fertilizers and soil conditioners — Vocabulary,*[1] which defines terminology used in this International Standard.

2 Principle

Establishment of the label size, the position of the declarations and the size of the characters (letters and figures) so as to enable the user to identify the fertilizer and to determine its characteristics. These details will vary according to whether the container holds :

- more than 25 kg (or 25 l) of fertilizer, or
- from 5 to 25 kg (or 5 to 25 l) of fertilizer, or
- less than 5 kg (or 5 l) of fertilizer.

3 General requirements

Declarations shall be legibly and indelibly marked on a uniform and contrasting background.

4 Pre-marked containers

4.1 Containers holding more than 25 kg (or 25 l) of fertilizer

4.1.1 Position and area of space for marking

A rectangular space, the total area of which shall be at least 10 % of the face selected, shall be provided on one of the main faces of the container. Declarations shall be marked within this area. The edges of the space shall be parallel to the edges of the container.

NOTE — It is recommended that the type and grade be also marked on the sides or gussets of non-rigid containers.

1) At present at the stage of draft.

4.1.2 Sizes of characters

Three sizes of characters shall be used, according to the area of the space for marking (4.1.1), so that the text can be set out clearly. These three sizes shall be in a ratio $X/Y/Z$ which may vary only within the limits indicated in table 1. The smallest letters shall have a height of at least 5 mm.

The size of lower-case characters shall be determined by the height of the letters without a down stroke (for example e, o, u, n).

The height of upper-case characters shall be typographically consistent with the height of the lower-case characters.

Table 1 — Ratio of the three sizes of characters

Size of the smallest letters	Ratio of sizes small (X), medium (Y), large (Z)	
mm	minimum ratio	maximum ratio
⩽ 9	1/2/4	1/3/9
> 9	1/1,5/3	1/2,5/7

4.1.3 Sizes of characters for declarations

The declarations shall be printed in characters corresponding to the type sizes given in table 2.

Table 2 — Sizes of characters for declarations

Declaration	Characters		
	Small X	Medium Y	Large Z
"Fertilizer"		X	
Type and grade		X	X
Composition — Nutrient content(s)		X	
Composition — Form(s) and/or solubility(ies)	X		
Composition — Fineness of grind	X		
Mass or volume		X	X
Name and address of the person or organization responsible for marketing	X	X	
Other requirements	X	X	

4.2 Containers holding from 5 to 25 kg (or 5 to 25 l) of fertilizer

All requirements specified in 4.1 shall be followed, except that the smallest characters shall have a height of at least 3 mm.

4.3 Containers holding less than 5 kg (or 5 l) of fertilizer

If the dimensions and the shape of the container permit, the space for marking shall have a minimum size of 120 mm × 70 mm and the smallest characters shall have a height of at least 2 mm. All the other requirements specified in 4.1 shall be followed, with the exception of the minimum/maximum ratios given in 4.1.2, however, which should be approximated.

5 Labels

5.1 Adhesive and similar labels

The requirements specified in clause 4 shall be followed if they are appropriate to the size and type of the container.

5.2 Tie-on labels

Tie-on labels shall have a minimum length of 120 mm and a minimum width of 70 mm. The smallest characters shall have a height of at least 2 mm.

6 Examples of declarations

The following declarations are examples of what may appear on containers or labels and are given for guidance.

6.1 The word "FERTILIZER" supplemented, if necessary, by any regulatory qualification.

6.2 The type and grade of fertilizer and, if necessary, its physical form (for example granular).

NOTES

1 It is advisable that the name of the fertilizer be followed by a simplified indication of the nutrient content.

Examples :

Ammonium nitrate 34
NP fertilizer 18-46
NPK fertilizer 12-15-18.

2 In a compound fertilizer containing only two of the elements N, P and K, the absence of the third element may be indicated by a zero.

Examples :

NK fertilizer 14-0-40
NP fertilizer 18-46-0

3 If it is desired to include the usual name of the fertilizer, which is different from the legal name, it should appear on the face of the container or the label where the declarations described in 6.1 to 6.6 appear.

Example

Ammonium phosphate 18-46
(for which the legal name would be
NP fertilizer 18-46)

6.3 The composition of the fertilizer, i.e.

— nutrient content(s);

— form(s) and/or solubility(ies);

— fineness of grind, if appropriate.

NOTE — With respect to the expression of form(s) and solubility(ies), the following rules should be followed, provided that there is no contradiction with national regulations.

a) If an element occurs in only one form or solubility, which is the whole of its declarable content, indicate its form and solubility after the content.

Examples :

— 15 % of ammoniacal nitrogen (N)
or
Ammoniacal nitrogen (N) = 15 %
or
15 % N ammoniacal nitrogen

— 40 % of phosphorus pentoxide (P_2O_5)
soluble in neutral ammonium citrate
or
Phosphorus pentoxide (P_2O_5)
soluble in neutral ammonium citrate = 40 %
or
40 % P_2O_5 phosphorus pentoxide soluble in neutral ammonium citrate.

b) If an element is present in several forms or solubilities, set out the value of each, under the declared value, in smaller characters (see 5.2).

Example :

X % TOTAL OF THE DECLARED VALUE including

(I) *m* solubility 1 or form 1
n solubility 2 or form 2

or

(II) *m* % solubility 1 or form 1
n % solubility 2 or form 2

To avoid any ambiguity, it is recommended that version (I) be adopted.

If a solubility included in the declared total includes another solubility, the value of the latter should also be declared, as described above.

6.4 The mass or volume of fertilizer.

6.5 The name and address of the person or organization responsible for marketing.

6.6 Any other requirements laid down in national regulations.