

## C05D

### INORGANIC FERTILISERS NOT COVERED BY SUBCLASSES C05B, C05C; FERTILISERS PRODUCING CARBON DIOXIDE

#### Definition statement

*This subclass/group covers:*

Fertiliser compositions containing potassium, calcium, magnesium and others, including trace elements for plants, processes and apparatus for obtaining them.

#### Relationship between large subject matter areas

Treating manure; apparatus for distributing fertiliser [A01C](#).

Soil-cultivation substrates [A01G 9/00](#).

Plant growth regulators [A01N](#).

Soil-conditioning or soil-stabilising materials [C09K 17/00](#).

Any apparatus for preparing fertilisers may be classified in those areas of C05 that are specific for such apparatus – e.g., [C05B 1/10](#) – apparatus for the manufacture of superphosphates. Otherwise, individual apparatus should be classified in the relevant area of the IPC, e.g., [F26B 7/00](#)

While the subject matter of [C05D](#) deals with inorganic fertilisers not covered by subclasses [C05B](#) and [C05C](#) per se, [A01C 3/00](#) deals with methods of treating manure/methods of manuring per se and [A01C 21/00](#) deals with methods of fertilising per se.

#### References relevant to classification in this subclass

*This subclass/group does not cover:*

Nitrogenous fertilisers	<a href="#">C05C</a>
Organic fertilisers not covered by subclasses <a href="#">C05B</a> , <a href="#">C05C</a> , e.g. fertilisers from waste or refuse	<a href="#">C05F</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Harrows with means for distributing fertilisers	<a href="#">A01B 25/00</a>
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Fertilisers distributors	<a href="#">A01C 15/00</a>
Mowers combined with dispensing apparatus, e.g. for fertilisers	<a href="#">A01D 43/14</a>
Horticulture; cultivation of vegetables, flowers, rice, fruit, vines, hops or seaweed; forestry; watering	<a href="#">A01G</a>
Root feeders; injecting fertilisers into roots	<a href="#">A01G 29/00</a>
Processes or devices for granulating materials, in general	<a href="#">B01J 2/00</a>
Potassium containing inorganic compounds	<a href="#">C01D</a>
Magnesium containing inorganic compounds	<a href="#">C01F 5/00</a>
Calcium containing inorganic compounds	<a href="#">C01F 11/00</a>
Lime, magnesia or dolomite and aspects of processing	<a href="#">C04B 2/00</a>
Treatment of molten slag	<a href="#">C04B 5/00</a>

### Special rules of classification within this subclass

An ingredient in a mixture of fertilisers, or a single fertiliser which contains more than one of the chemical elements on which the subdivision is based, is classified only in the first of the appropriate places. Thus, a nitrophosphate or an ammoniated superphosphate is classified in [C05B](#) but not in [C05C](#), magnesium phosphate is classified in [C05B](#) but not in [C05D](#), and calcium cyanamide in [C05C](#) but not in [C05D](#).

Information relative to the form in which the fertilizer is presented, e.g. granulation, coating, etc. is always given in addition to the chemical composition of the fertilizers.

Any ingredient in a mixture, which is considered to present information of interest for search, is also classified using a combination of classification symbols. If a document concerns embodiments comprising mixtures whose elements are covered individually by different subclasses, groups or

subgroups, the document is classified with a combination set.

The following rules apply:

- The first element of the combination set corresponds to the first relevant (sub)group mentioned in the classification scheme independently of the importance or relevance of the element in the whole fertilizer mixture;
- the following element or elements of the combination set are added sequentially in the order in which they appear in the classification scheme to the first element using a ",".

Example: a fertilizer containing a mixture of superphosphate ([C05B 1/02](#)), ammonium nitrate ([C05C 1/00](#)) and potassium chloride ([C05D 1/02](#)) will be given the combination set [C05B 1/02](#), [C05C 1/00](#), [C05D 1/02](#).

Example: a fertilizer containing a mixture of either superphosphate ([C05B 1/02](#)) or ammonium nitrate ([C05C 1/00](#)) with potassium chloride ([C05D 1/02](#)) will be given the combination set [C05B 1/02](#), [C05D 1/02](#) and [C05C 1/00](#), [C05D 1/02](#).

## Glossary of terms

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

Fertiliser (fertiliser material)	Natural or artificial substance containing the chemical elements that improve growth and productiveness of plants.
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## Synonyms and Keywords

In patent documents the following expressions "fertiliser" and "plant nutrient" are often used as synonyms.

In patent documents the following expressions/words "Amendment", "Plant food", "Agricultural chemical" and "Fertiliser" are often used as synonyms.

In patent documents the expression/word "enrichment" is often used with the meaning "fertiliser"

The expression "soil amendment" is often used with the meaning "composition capable of modifying the chemical (pH) or physical (structure) condition of soils for agricultural purposes".

## C05D 1/00

## Fertilisers containing potassium (C05D7/00 takes precedence)

### Relationship between large subject matter areas

Inorganic compounds of potassium	<a href="#">C01D</a>
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### References relevant to classification in this group

*This subclass/group does not cover:*

Fertilisers producing carbon dioxide	<a href="#">C05D 7/00</a>
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### Special rules of classification within this group

This group contains potassium containing fertilizer compounds which do not fall neither under the definition of the former subclasses [C05B](#), [C05C](#) nor under the definition of the subgroups [C05D 1/005](#), [C05D 1/02](#), [C05D 1/04](#).

Examples of these compounds are generic references to potassium cations, potassium oxide, potassium hydroxide etc.

Documents classified in [C05D 1/005](#) should also have an additional code of the pertinent group(s) corresponding to the specific post treatment involved.

## C05D 3/00

### Calcareous fertilisers (C05D7/00 takes precedence)

### References relevant to classification in this group

*This subclass/group does not cover:*

Fertilisers producing carbon dioxide	<a href="#">C05D 7/00</a>
Calcium phosphates	<a href="#">C05B 1/00</a> , <a href="#">C05B 3/00</a> , <a href="#">C05B 5/00</a> , <a href="#">C05B 13/00</a> , <a href="#">C05B 17/00</a>

## C05D 3/04

from blast-furnace slag or other slags containing lime or calcium silicates

### References relevant to classification in this group

*This subclass/group does not cover:*

Thomas phosphate	<a href="#">C05B 5/00</a>
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## **C05D 5/00**

**Fertilisers containing magnesium (C05D7/00 takes precedence)**

### **References relevant to classification in this group**

*This subclass/group does not cover:*

Fertilisers producing carbon dioxide	<a href="#">C05D 7/00</a>
Fertilisers based in magnesium phosphate	<a href="#">C05B 9/00</a>

## **C05D 7/00**

**Fertilisers producing carbon dioxide**

## **C05D 9/00**

**Other inorganic fertilizers**

### **Definition statement**

*This subclass/group covers:*

All remaining inorganic fertilisers for which no relevant classification entry exists in the preceding groups. Some examples of fertilizers to be classified here are compounds of sodium, sulphur, chloride, silica per se or in the form of bentonite or diatomaceous earth, silicates, fullers' earth and materials such as ashes, chars, clays (vermiculite, kaolin, etc.) or zeolites, etc. with the proviso that these compounds could not be classified in a previous specific class.

### **Special rules of classification within this group**

Mixtures of these fertilizers with other fertilizers belonging individually to other groups of the classification will be given a Combination Class as explained under the corresponding passage for the class C05.

### **Glossary of terms**

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

In this group, the following term is often used with the meaning indicated:

Fuller's earth	The term is used here in reference to claylike earthy materials which main use is to decolorize, filter or purify oils and fats. This term refers sometimes also to bentonite.
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## **C05D 9/02**

### **containing trace elements**

#### **Definition statement**

*This subclass/group covers:*

Fertilizers containing compounds of elements which as trace element are essential or beneficial for plants.

The following elements are classified here: iron, manganese, boron, zinc, molybdenum, nickel, cobalt or copper.

The elements chromium, selenium, iodine and silicon are also classified under this entry if the purpose of the fertilization is to provide trace elements to plants. Eventually, other elements serving this purpose would be classified here.

#### **Special rules of classification within this group**

Mixtures of these fertilizers with other fertilizers belonging individually to other groups of the classification will be given a Combination Class as explained under the corresponding passage for the class C05.

#### **Glossary of terms**

*In this subclass/group, the following terms (or expressions) are used with the meaning indicated:*

In this group, the following term is used with the meaning indicated:

Trace element; micro-element; oligoelement	Elements essential or beneficial for plant life in very small (trace) quantities; for classification purposes these elements are: Fe, Mn, Zn, Cu, Ni, Cl, B, Mo, Si, Se
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## **Synonyms and Keywords**

In patent documents the following words "trace element" , "microelement" and "oligoelement" are often used as synonyms.