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**Datasheet for the decision
of 19 May 2011**

Case Number: T 2036/08 - 3.3.01

Application Number: 03737297.6

Publication Number: 1471787

IPC: A01N 59/20

Language of the proceedings: EN

Title of invention:

Compositions of cupric salts and their use for the control of
phytopathogenic fungi

Patentee:

ISAGRO S.p.A.

Opponent:

Diachem S.p.A.

Headword:

Cupric salts as fungicides/ISAGRO S.p.A.

Relevant legal provisions:

EPC Art. 123(3)(2), 56, 54

Relevant legal provisions (EPC 1973):

-

Keyword:

"Added matter - (no) - Accidental disclosure disclaimed"

"Novelty - (yes)"

"Inventive step - (yes)"

Decisions cited:

G 0001/03

Catchword:

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Case Number: T 2036/08 - 3.3.01

DECISION
of the Technical Board of Appeal 3.3.01
of 19 May 2011

Appellant:
(Patent Proprietor)

ISAGRO S.p.A.
Via Caldera 21
I-20153 Milano (IT)

Representative:

Coletti, Raimondo
Barzanò & Zanardo Milano S.p.A.
Via Borgonuovo, 10
I-20121 Milano (IT)

Respondent:
(Opponent)

Diachem S.p.A.
Via Tonale 15
I-24061 Albano Sant'Allesandro (IT)

Representative:

HOFFMANN EITLE
Patent- und Rechtsanwälte
Arabellastraße 4
D-81925 München (DE)

Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted 18 August 2008
revoking European patent No. 1471787 pursuant
to Article 101(2) EPC.**

Composition of the Board:

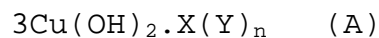
Chairman: P. Ranguis
Members: J.-B. Ousset
D. S. Rogers

Summary of Facts and Submissions

- I. The appellant (patentee) lodged an appeal against the decision of the opposition division to revoke the European patent N° 1 471 787.
- II. Relevant for the present decision is, in particular, the fifth auxiliary request filed at the oral proceedings before the opposition division.

Independent claim 1 of the fifth auxiliary request read as follows:

"1. Use of mixtures consisting of copper (II) hydroxide with one other cupric salt having formula (A):



Wherein:

- X represents the copper (II) or calcium (II) ion;
 - Y has the meaning of a chloride or sulfate ion;
 - n is an integer which can have the value of 1 or 2;
- for the control of phytopathogenic fungi."

- III. The decision of the opposition division was based on the following cited documents:

- (1) CH-A-452 990
- (2) US-A-4 075 326
- (3) GB-A-2 016 924
- (4) Ullmann's Encyclopaedia of Industrial Chemistry, Vol. A 7, 5th Ed, "Copper Compounds", pp 567-593, 1986
- (5) Ullmann's Encyclopaedia of Industrial Chemistry,

Vol. A 12, 5th Ed, "Fungicides Agricultural", pp
85-118, 1989

(7) GB-A-728 520

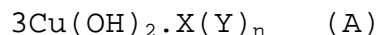
(8) GB-A-940 764

The opposition division considered that the pending main request as well as the first and second auxiliary requests were not novel in view of the disclosure of document (7). Auxiliary requests 3 and 4 lacked an inventive step in view of the disclosure of document (1). The subject-matter of auxiliary request 5 was also considered as not inventive on the basis of document (2) since it could not be seen which non-obvious effects result from the use of a combination of Cu(OH) and copper oxychloride as compared to the use of the combinations of the closest prior art comprising in addition an organic Cu-salt (formulation q).

- IV. With its statement setting out the grounds of appeal, the appellant filed a main request and two auxiliary requests.
- V. With a letter of 20 May 2009, the opponent (respondent) informed the board that it has decided to withdraw its opposition.
- VI. In the communication annexed to the invitation to oral proceedings, the board gave its provisional opinion as to the patentability of the main request.
- VII. With a second letter, the appellant filed **a set of twelve claims** as a main request and two auxiliary requests, which superseded the previous requests filed with its statement setting out the grounds of appeal.

Independent Claims 1, 6, 7, 8 and 11 of the main request read as follows:

"1. Mixtures of copper (II) hydroxide with at least one other cupric salt having formula (A):



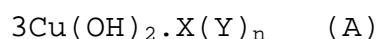
Wherein:

- X represents the copper (II) or calcium (II) ion;
 - Y has the meaning of a chloride or sulfate ion;
 - n is an integer which can have the value of 1 or 2;
- with the exclusion of $\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2 + 6 \text{Cu}(\text{OH})_2$."

"6. A process for the preparation of mixtures according to one of the claims from 1 to 5, characterized in that it comprises a mechanical blending of copper (II) hydroxide and one or more cupric salts having formula A as defined above, or by mixing the single salts formulated in the form of specific compositions."

"7. A process for the preparation of mixtures according to one of the claims from 1 to 5, characterized in that it comprises a partial transformation of a suspension of cupric salts having formula A selected from cupric chloride, cupric sulfate or cupric oxychloride with an alkaline hydroxide, such as sodium or potassium or calcium hydroxide."

"8. Use of mixtures of copper (II) hydroxide with one other cupric salt having formula (A):



Wherein:

- X represents the copper (II) or calcium (II) ion;
 - Y has the meaning of a chloride or sulfate ion;
 - n is an integer which can have the value of 1 or 2;
- for the control of phytopathogenic fungi."

"11. A method for controlling phytopathogenic fungi in agricultural crops by the application of the mixtures as defined in one of the claims 8-10."

It also argued as follows:

- The disclaimer in claim 1 was meant to exclude nothing more than the subject-matter disclosed in document (7), which represented an accidental disclosure according to the decision G 1/03.
- The amendments were in agreement with Article 123(2),(3) EPC.
- Novelty was to be acknowledged, since the claimed mixture was disclosed in none of the cited documents.
- An inventive step for the claimed subject-matter was to be acknowledged, since there was no hint from document (1), alone or in combination with the other cited documents to arrive at the claimed invention. He also submitted that the claimed subject-matter was not obvious in view of document (2) and the experimental data (enclosure A1) submitted with the statement of grounds of appeal. Those experiments showed that the fungicidal

activity of the mixture copper hydroxide + copper oxychloride was higher for the same amount of copper than the fungicidal activity of the preparation q disclosed in document (2).

VIII. The appellant requested that the decision of the opposition be set aside and that a patent be granted either on the basis of the main request or on the basis of one of the auxiliary requests 1 and 2, all filed with the appellant's letter of 25 March 2011.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. Amendments

2.1 Claim 1 has been amended by adding the following disclaimer: "... with the exclusion of $\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2 + 6\text{Cu}(\text{OH})_2$..."

2.2 It should thus be verified whether this disclaimer is in agreement with the requirements set out in the decision of the Enlarged Board of Appeals G 1/03 (OJ EPO 2004, 413).

According point 2.1 of the order of this decision, a disclaimer can be allowed if it intends to "restore novelty by delimiting a claim against an accidental anticipation under Article 54(2) EPC; an anticipation is accidental if it is so unrelated to and remote from

the claimed invention that the person skilled in the art would never have taken it into consideration when making the invention."

The mixture " $\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2 + 6\text{Cu}(\text{OH})_2$ " disclaimed by the appellant is based on the content of document (7) (see page 2, left-hand column, line 83). This passage of document (7) discloses this specific mixture of copper derivatives. Hence, the disclaimer does not remove more than necessary to restore novelty over document (7). Moreover, document (7) relates to the treatment of yarn in spinning solutions to lessen difficulties in coagulating treatments (see column 4, lines 14 to 50). This use is different from the use described in the patent in suit namely, a fungicidal property (see claim 8 as granted). The board therefore considers that the person skilled in the art trying to make available further mixtures having fungicidal properties would not have considered the mixtures of copper salts used in the treatment of yarn, which lessen the difficulties in coagulating treatments. Document (7) is thus remote from the claimed invention and is regarded as an accidental disclosure in the sense of the decision G 1/03 (cited above).

- 2.3 The amendments carried out by the appellant fulfil the requirements of Article 123(2) EPC.
- 2.4 The introduction of a disclaimer limits the claimed scope. Consequently, Article 123(3) is also fulfilled by this amendment.

3. Novelty

- 3.1 The disclaimer in claim 1 of the main request excludes the part of the content of document (7) which describes the same compositions as claimed in claim 1.

Since this disclaimer fulfils the requirements set out in the decision G 1/03 (cited above), novelty of the claimed subject-matter vis-à-vis document (7) is acknowledged.

- 3.2 Document (1) (see first page, column 2, "Vergleichsversuche") discloses compositions containing a salt according to formula (A) of claim 1 of the patent in suit (see "Vergleichsversuche "A" and "B", "Kupferoxychlorid") and other constituents like "Äthylenebis-dithiocarbamat des Zinks" or "Mancozebe". Document (1) also recites (see page 1, column 1, lines 17 to 27) that in addition to compositions containing already a compound according to the formula (A) (see Kupferoxychlorid") and a basic copper sulfate, copper hydroxide can be added.

However, such compositions are not identical to the compositions claimed in the patent in suit, because the latter contain **only** copper salts as described in claim 1 and copper hydroxide. Since the compositions described in document (1) (see column 2 of page 1) contain other constituents differing from the copper salts required in the compositions of claim 1 of the patent in suit (e.g. "Mancozebe", copper(II) sulfate), they cannot question the novelty of the claimed subject-matter.

- 3.3 A similar reasoning can be applied with the disclosure of document (2). This document describes in example 2 (see column 8, lines 66 to 68) a composition containing **not only** copper (II) hydroxide (constituent "B-4") and copper oxychloride (constituent "B-1") which are all required in the compositions of claim 1 of the patent in suit **but also** a further constituent, namely "I-1" which is copper terephthalate (see column 7, lines 5 to 8). The said composition of example 2 of document (2) is thus not identical to the compositions claimed in the patent in suit.
- 3.4 Document (8) does not disclose the specific composition described in claim 1 of the patent in suit. The compositions of document (3) require the presence of an extra compound, namely 2-cyano-N-[(ethylamino)carbonyl]-2-(methoxyimino)acetamide. Hence, the compositions disclosed in these documents are different from the ones currently claimed.
- 3.5 Since none of the cited documents discloses the mixtures of claim 1 of the patent in suit, novelty of claim 1 as well as dependent claims 2 to 5 is acknowledged. Since the processes described in claims 6 and 7 aim at obtaining the compositions described in claim 1, these claims are also novel.

Independent claim 8 describes the use of the mixtures of claim 1 without the specific exclusion of the specific mixture " $\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2 + 6\text{Cu}(\text{OH})_2$ ". Since this specific mixture is disclosed in document (7), considered as an accidental disclosure according to the decision G 1/03 (see point 2.2, above), the novelty of

use claim 8 as well as dependent claims 9 to 12 is acknowledged.

The subject-matter of the main request is therefore novel (Article 54 EPC).

4. Inventive step

4.1 In assessing inventive step, claim 8 relating to the use of the mixture copper(II) hydroxide with cupric salt having formula (A) is to be examined first since it contains no disclaimer.

4.2 Document (2) represents the closest prior art, since it discloses copper(II)-containing mixtures (see claim 1 and column 1, lines 22 to 35) which are used as fungicides (see claim 1 and page 1, column 1, lines 8 to 9). Eventually, the fungicidal mixtures described in document (2) function also synergistically (see column 5, lines 58 to 64). As already detailed in point 3.3 above, the mixtures of documents (2) differ from the ones of the patent in suit in that they contain at least one further constituent (here copper salt of a unsaturated dibasic acid) which are not present in the compositions of the patent in suit.

By contrast, document (1) is more remote from the claimed invention than document (2) given that the mixtures in document (1) contain, additionally to copper (II) derivatives further organic fungicides like Manebe or Zinebe, which respectively contain manganese and zinc (see Examples).

4.3 Hence, the problem underlying the patent in suit is to be determined in view the disclosure of document (2) and can seen in the provision of copper(II) mixtures having **improved** fungicidal properties.

4.4 The solution proposed by the appellant are the mixtures described in claim 1 of the patent in suit.

4.4.1 With the statement of grounds of appeal, the appellant submitted experiments aiming at comparing the fungicidal effects obtained with Example (q) of document (2) and Example (1) of the patent-in-suit (see enclosure A1).

4.4.2 The following fungicidal activity against *Plasmopora viticola* in a greenhouse in preventive applications using aqueous suspensions were obtained:

Composition	CTP (g/hl Cu)	CH (g/hl Cu)	COC (g/hl Cu)	Activity
C1	3.3	6.3	2.4	74
	1.65	3.15	1.2	42
C2		6.0	6.0	96
		3.0	3.0	64

C1 is a composition according to Example 2(q) of document (2)

C2 is a composition according to Example 1 of the patent-in-suit.

CTP is copper terephthalate

CH is copper hydroxide

COC is copper oxychloride

From the above table, it can be noted that a higher activity is obtained by using a composition according to the patent-in-suit than by using a composition according to document (2), Example 2(q), for the same amount of copper.

In view of the Examples of the patent-in-suit and the general description, it is considered that the technical problem was solved over the whole claimed area (see page 2, line 5 to page 3, line 25 and Examples).

4.5 It thus remains to verify whether this solution could be deduced by the person skilled in the art from the available prior art and using his common general knowledge in the field.

4.5.1 Document (2) discloses fungicidal mixtures containing at least two types of essential constituents, namely at least one compound of the group "B" (among them copper oxychloride and copper hydroxide) and at least one compound of the group "A", namely a copper salt of an unsaturated dibasic acid. It results there from that the fungicidal effect observed for the mixtures of document (2) requires the presence of at least one compound from each group "A" and "B". Consequently, to obtain fungicidal properties the presence of a copper salt of an unsaturated dibasic acid is required **in addition** to the presence of one or more compounds of the group "B" (e.g. copper oxychloride and copper hydroxide) is required in document (2). Furthermore, there is no hint in document (2) indicating that the absence of compound "A" would lead to mixtures having a higher fungicidal activity.

In view thereof, the person skilled in the art starting from document (2) would not find any hint or suggestion in this document indicating that the synergistic **higher** effect will be **observed** if one or more compound of the group "A", namely the copper salt of the unsaturated dibasic acid, were to be omitted. As a consequence, by omitting such an essential feature, the claimed invention is inventive over the disclosure of document (2).

4.5.2 Moreover, document (1) would not give the person skilled in the art any further information which could lead him, without the exercise of inventive skill, to the claimed subject-matter, since the fungicidal mixtures of document (1) require also the presence of an organic fungicide, the latter being not required in the mixtures claimed in claim 1 of the patent in suit.

4.5.3 The other documents do not provide the person skilled in the art with any further information, which could lead him to solve the problem underlying the patent in suit in an obvious manner.

Document (3) discloses a fungicidal mixture comprising an organic fungicide (2-cyano-N-[(ethylamino) carbonyl]-2-(methoxyimino) acetamide and a copper compound.

Document (4) discloses individual copper compounds as fungicidal agents.

Document (5) was cited against claim 13 as granted relating to a list of individual compounds having fungicidal properties but no composition was disclosed.

Document (8) does not contain any specific indication of an exact composition.

- 4.6 In view thereof, the board concludes that the subject-matter of claim 8 of the patent in suit is based on an inventive step (Article 56 EPC). Claims 9 to 12 are also inventive, since they are dependent of claim 8. This conclusion applies to independent claim 1 related to the product itself (with the exclusion of $\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2 + 6 \text{Cu}(\text{OH})_2$) and dependent claims 2 to 5 and to claims 6 and 7 related to a process for preparing the mixtures of claim 1. Claims 11 and 12 derive their inventive concept from the inventive concept of claim 8 and are thus also based on an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to grant a patent with the claims 1 to 12 of the main request and a description to be adapted.

The Registrar

The Chairman

M. Schalow

P. Ranguis