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**Datasheet for the decision
of 18 August 2023**

Case Number: T 1145/20 - 3.3.02

Application Number: 15701705.4

Publication Number: 3107385

IPC: A01N25/04, A01N43/56,
A01N47/24, A01N37/46

Language of the proceedings: EN

Title of invention:

AQUEOUS AGROFORMULATION COMPRISING SUSPENDED PESTICIDE,
CELLULOSE ETHER AND THICKENER

Patent Proprietor:

BASF SE

Opponents:

Bayer Intellectual Property GmbH /
Bayer Aktiengesellschaft

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no)



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Case Number: T 1145/20 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 18 August 2023

Appellants:

(Opponents)

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and

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Representative:

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Representative:

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Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
9 March 2020 concerning maintenance of the
European Patent No. 3107385 in amended form**

Composition of the Board:

Chairman M. O. Müller
Members: A. Lenzen
 M. Blasi

Summary of Facts and Submissions

- I. The present decision concerns the appeal filed by the joint opponents (appellants) against the opposition division's decision (decision under appeal) according to which European patent No. 3 107 385 (patent) in amended form meets the requirements of the EPC.
- II. The following documents, filed before the opposition division, are relevant to the present decision:
- D4 METHOCEL Cellulose Ethers, Technical Handbook, 2002
- D6 Ozaki, S. et al., Journal of Pharmaceutical Sciences 2013, vol. 102, no. 7, pages 2273 to 2281
- III. The decision under appeal is based, *inter alia*, on the sets of claims of the main request and the first auxiliary request, both filed with the reply to the notice of opposition. As far as relevant to the present decision, the decision under appeal can be summarised as follows:
- The subject-matter of claim 1 of the main request, i.e.

"Use of methylhydroxypropyl cellulose for reducing the crystal growth of a water-insoluble pesticide in form of suspended particles in an aqueous composition.",

was not novel over D6.

- The subject-matter of claim 1 of the first auxiliary request, i.e.

*"Use of methylhydroxypropyl cellulose for reducing the crystal growth of a water-insoluble pesticide in form of suspended particles in an aqueous composition, **wherein the aqueous composition comprises a thickener selected from inorganic clays or from polysaccharides, which are different from the methylhydroxypropyl cellulose.**"* (the feature in bold is the additional feature over claim 1 of the main request)

was novel over D6 because this document did not disclose a thickener as provided for in claim 1. It also involved an inventive step starting from D3 as the closest prior art. D6 was not considered as the closest prior art. Even if D6 were taken as the closest prior art, the claimed subject-matter would still involve an inventive step over D6 alone or D6 in combination with D2, D3 or D5.

- IV. In preparation for the oral proceedings, arranged at the parties' request, the board issued a communication pursuant to Article 15(1) RPBA 2020 setting out its preliminary opinion on, *inter alia*, the issue of inventive step.
- V. By letter of 5 July 2023, the patent proprietor (respondent) withdrew its request for oral proceedings and announced that it would not be attending the scheduled proceedings.
- VI. The board then cancelled the oral proceedings.

VII. The parties' requests relevant to the present decision are as follows:

The appellants request that the decision under appeal be set aside and the patent be revoked in its entirety.

The respondent requests:

- that the appeal be dismissed, implying that the decision under appeal be confirmed and the patent be maintained as amended in the form considered allowable by the opposition division (hereinafter: main request)
- alternatively, that the patent be maintained in amended form based on the set of claims of the second auxiliary request filed with the reply to the notice of opposition (hereinafter: first auxiliary request)

VIII. Summaries of the respondent's arguments on the allowability of the main request and the first auxiliary request are contained in the reasons for the decision.

IX. The appellants' arguments on the allowability of the main request and the first auxiliary request as understood by the board can be summarised as follows:

D6 was the closest prior art. The subject-matter of claim 1 of the main request and the first auxiliary request differed from D6 only in that the aqueous composition comprised a thickener selected from inorganic clays or from polysaccharides, which are different from the methylhydroxypropyl cellulose. No effect was linked to this distinguishing feature. The objective technical problem was to provide a mere

alternative. To this end, the skilled person would have added thickeners as required by claim 1 of the main request or of the first auxiliary request.

Reasons for the Decision

Main request - inventive step (Article 56 EPC)

1. Claim 1 reads as follows:

"Use of methylhydroxypropyl cellulose for reducing the crystal growth of a water-insoluble pesticide in form of suspended particles in an aqueous composition, wherein the aqueous composition comprises a thickener selected from inorganic clays or from polysaccharides, which are different from the methylhydroxypropyl cellulose."

2. Closest prior art

2.1 It was a matter of dispute whether D6 can be considered to represent the closest prior art.

2.2 D6 discloses the addition of seed crystals of griseofulvin to supersaturated aqueous solutions thereof, both in the presence and in the absence of methylhydroxypropyl cellulose (MHPC). This results in a suspension of the seed crystals in the supersaturated aqueous solution. The crystal growth rate of griseofulvin decreases in the presence of MHPC (page 2274, left-hand column, lines 30 to 35; page 2277, "Impact of Polymers on Crystal Growth Kinetics"; page 2275, "Measurement of Crystal Growth Rate", describing the use of fasted state simulated intestinal fluid (FaSSIF), i.e. an aqueous composition, as the solvent).

As stated in the decision under appeal (page 9, third paragraph, last sentence) and not disputed by the respondent, griseofulvin is to be considered water-insoluble, given its water solubility of 8.64 mg/L at 25°C.

Furthermore, the feature "*pesticide*" of claim 1 has to be construed broadly as a compound suitable for controlling pests. Griseofulvin is a fungicide and hence a pesticide.

2.3 It follows from the above that D6 discloses the following features of claim 1:

"Use of methylhydroxypropyl cellulose for reducing the crystal growth of a water-insoluble pesticide in form of suspended particles in an aqueous composition ..."

D6 thus discloses, in particular, the effect aimed at by the use of claim 1 and, contrary to the respondent's and the opposition division's views, can be considered to represent the closest prior art for this reason alone.

In support of its view that D6 could not be taken as the closest prior art, the respondent submitted the following arguments, partly in line with the opposition division's view:

2.3.1 More specifically, the respondent argued that the patent related to agrochemical compositions. By contrast, D6 was concerned with pharmaceutical compositions. This was evidenced by the fact that the active ingredient griseofulvin of D6 had never been

used or approved for use in agriculture. There was no overlap between pharmacy and agriculture. Hence D6 related to a technical field different from that of the patent.

This argument assumes that the word "pesticide" in claim 1 implies a use in agriculture and that this is clearly distinct from a use in pharmacy. However, as already pointed out above, the word "pesticide" has to be construed broadly as a compound suitable for controlling pests. This implies a limitation in terms of the suitability of the compound in question for this purpose but not in terms of the technical field. The respondent's argument is thus not convincing.

- 2.3.2 The respondent also argued that the patent dealt with the thermodynamically controlled reduction of Ostwald ripening in already-existing suspensions. D6 on the other hand tried to provide supersaturated solutions and to avoid the formation of suspensions. To this end, D6 investigated the kinetically controlled growth of seed crystals. Thickeners, which were commonly used to stabilise suspensions, were not disclosed in D6 as their presence would have served no purpose. Hence the mechanisms and the dynamics of crystal growth reduction in the patent differed from those of D6. Moreover, the skilled person would not have started from D6 in order to increase the stability of existing suspensions, since this document taught that MHPC actually increased the solubility of griseofulvin, thereby favouring Ostwald ripening.

The board does not agree. The ultimate aim of the patent (increasing the stability of suspensions by reducing Ostwald ripening) may be different from that of D6 (increasing the stability of supersaturated

solutions by preventing the formation of suspensions). However, this does not disqualify D6 as the closest prior art for the subject-matter of claim 1. This is because, as set out above, D6 discloses precisely the effect recited in claim 1 and the closest prior art is determined based on that claimed effect, and not on consequences attributable to that effect in particular compositions. Put differently, the mechanism and the dynamics of D6 are not excluded by the wording of claim 1. In relation to the respondent's last argument, it may be noted that it is stated in D6 that MHPC does not affect the (thermodynamic) solubility of, *inter alia*, griseofulvin (page 2275, first two sentences under "Dissolution Profiles of Amorphous Drugs"), contrary to the respondent's assertion.

2.3.3 The arguments above cannot therefore call into question that D6 can be considered to represent the closest prior art.

3. Distinguishing feature

As indicated in point 2.3, the subject-matter of claim 1 differs from D6 only in that

"the aqueous composition comprises a thickener selected from inorganic clays or from polysaccharides, which are different from the methylhydroxypropyl cellulose."

4. Technical effect and objective technical problem

4.1 In its communication pursuant to Article 15(1) RPBA 2020, the board stated that the distinguishing feature above did not seem to be associated with any surprising technical effect, and

that the objective technical problem, therefore, appeared to be to provide a further aqueous composition which is suitable for the investigations disclosed in D6. No further submissions were made by the respondent on this issue in the further course of the appeal proceedings.

4.2 As regards the formulation of the objective technical problem in the decision under appeal, the relevant part reads as follows (page 15, third and fourth paragraph):

"... if the person skilled in the art had started from document D6 as closest state of the art, the difference with the claimed subject-matter is the inhibition of crystal growth in suspensions comprising a water-insoluble pesticide and a thickener; D6 does not mention a thickener.

The technical problem to be solved would be the provision of an agent which is able to inhibit crystal growth of a water-insoluble pesticide in a suspension comprising a thickener, wherein the suspension remains stable and does not lead to solubility of the components."

Thus, apart from the thickener, the opposition division seems to have seen another difference between the subject-matter of claim 1 and D6 in the fact that D6 allegedly does not disclose *"the inhibition of crystal growth in suspensions comprising a water-insoluble pesticide"*. This wording seems to allude to the feature *"for reducing the crystal growth of a water-insoluble pesticide in form of suspended particles"* in claim 1. However, the opposition division considered that this very feature was anticipated by D6 for the main request before the opposition division (see point III. above).

With regard to this feature and the question of whether it is disclosed in D6, the opposition division thus reached contradictory results in its assessment. Moreover, the opposition division's formulation of the objective technical problem seems to be a mere reformulation of the distinguishing features without taking into account any technical effect(s) linked to them. The board therefore does not find this analysis set out in the decision under appeal convincing.

4.3 The objective technical problem, therefore, is to provide a further aqueous composition which is suitable for the investigations disclosed in D6.

5. Obviousness

5.1 The addition of any arbitrary ingredients such as a thickener as required by claim 1 to the composition of D6 is a routine measure of the skilled person. Faced with the objective technical problem set out in point 4.3, the skilled person would thus have routinely added a thickener. By proceeding in this way, the skilled person would have arrived at the subject-matter of claim 1.

Furthermore, as is well-known, MHPC has thickening properties, see

- D4: page 3, middle column, penultimate paragraph, disclosing the thickening properties of METHOCEL cellulose ethers in aqueous systems, and
- D4: page 6, left-hand column, first paragraph, disclosing that hydroxypropyl methylcellulose, which is the same as methylhydroxypropyl cellulose, is one type of METHOCEL cellulose ether.

Therefore the skilled person would not have been deterred by D6 from adding e.g. minor quantities of other thickening agents such as inorganic clays or polysaccharides different from MHPC.

- 5.2 Thus the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 56 EPC and the main request is not allowable.
6. The reasoning above as regards inventive step had already been set out in the board's communication pursuant to Article 15(1) RPBA 2020 and no further submissions were made on this issue by the respondent in the further course of the appeal proceedings.

First auxiliary request - inventive step (Article 56 EPC)

7. Claim 1 of the first auxiliary request differs from claim 1 of the main request only in that the thickener has been limited to inorganic clays. This feature has already been considered in the context of the main request.

For the reasons given above, the subject-matter of claim 1 of the first auxiliary request does not involve an inventive step within the meaning of Article 56 EPC either. The first auxiliary request is not allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated