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**Datasheet for the decision
of 23 July 2019**

Case Number: T 0062/15 - 3.3.02

Application Number: 06813996.3

Publication Number: 1947935

IPC: A01N25/30, A01N47/36,
A01N43/70, A01P13/02

Language of the proceedings: EN

Title of invention:

LIQUID SULFONYLUREA HERBICIDE FORMULATIONS

Patent Proprietor:

FMC Corporation

Opponent:

Rotam Limited

Headword:

Relevant legal provisions:

RPBA Art. 12(4)
EPC 1973 Art. 83, 54, 56

Keyword:

Late-filed evidence
Sufficiency of disclosure
Novelty
Inventive step

Decisions cited:

T 0724/08, T 0432/12, T 1314/12, T 2001/12, G 0002/88

Catchword:

Evidence filed with the statement of grounds of appeal - prima facie relevance and interests of the public in valid patents not taken into account when deciding on admittance (point 1 of the reasons)



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Case Number: T 0062/15 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 23 July 2019

Appellant:
(Opponent)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 24 October 2014
rejecting the opposition filed against European
patent No. 1947935 pursuant to
Article 101(2) EPC**

Composition of the Board:

Chairman	M. O. Müller
Members:	S. Bertrand
	M. Blasi

Summary of Facts and Submissions

- I. The appeal by the opponent (hereinafter "appellant") lies from the decision of the opposition division, according to which the opposition filed against European patent EP 1 947 935 was rejected.
- II. The contested patent contained a set of 12 claims, the independent claim 1 of which reads as follows:

"1. A single liquid-phase herbicide composition comprising by weight:

(a) from 0.1 to 20% of one or more sulfonylurea herbicides;

(b) from 0 to 40% of one or more biologically active agents other than sulfonylurea herbicides;

(c) from 0.1 to 20% of one or more lignosulfonates;

(d) from 40 to 99.8% of one or more fatty acid esters of C₁ -C₄ alkanols; and

(e) from 0 to 50% of one or more additional formulating ingredients;

wherein the liquid carrier of the single liquid-phase composition comprises component (d)."

- III. The following documents are referred to in the present decision:

D3: US 2002/0045549 A1

D28: Experimental report filed with letter dated 31 July 2013 during opposition proceedings

D29: Annex A filed with the opponent's statement of grounds of appeal

D30: Annex B filed with the opponent's statement of grounds of appeal

- IV. In its decision the opposition division came to the conclusion that the grounds for opposition under Article 100(a) EPC of lack of novelty and lack of inventive step and under Article 100(b) EPC of lack of sufficiency of disclosure did not prejudice the maintenance of the patent as granted.
- V. In its statement setting out the grounds of appeal, the appellant contested the reasoning of the opposition division and submitted that the patent as granted did not disclose the invention defined in claim 1 across the whole scope claimed, that the subject-matter of the granted claims lacked novelty and an inventive step, both in view of D3. It submitted D29 and D30 as experimental evidence in support of its objections.
- VI. The patent proprietor (hereinafter "respondent") filed a response to the statement of grounds of appeal. It rebutted the appellant's arguments.
- VII. Thereafter, the board issued a communication in preparation for the oral proceedings scheduled according to the requests of the parties.
- VIII. In a subsequent letter, the respondent filed further arguments concerning the patentability of the granted claims.
- IX. Oral proceedings before the board were held on 23 July 2019.

X. The appellant's case, where relevant to the present decision, may be summarised as follows:

Admittance of D29 and D30:

- D29 and D30 should be admitted into the proceedings. For details, see point 1.3 of the reasons of the present decision.

Sufficiency of disclosure:

- The invention as defined in claim 1 was insufficiently disclosed. For details, see point 3.2 of the reasons of the present decision.

Novelty

- Formulation example F3 of D3 fell within the scope of claim 1 of the patent, with the exception that no lignosulfonate was present.
- D3 disclosed a list of anionic and non-anionic surfactants that were to be used in the disclosed composition. Paragraph [0006] of D3 contained a short list of possible surfactants.
- Starting from formulation example F3 of D3 the skilled person only needed to select lignosulfonate from the single and short list of paragraph [0006] of D3 to arrive at a composition having all the features cited in claim 1 of the patent.

Inventive step

- Formulation example F3 was the closest composition to the subject-matter of claim 1 of the patent.
- The composition cited in claim 1 of the patent differed from this example in that it comprised 0.1 to 20 % by weight lignosulfonate.
- The range cited in claim 1 relating to component (c), lignosulfonate, made no contribution to the alleged technical effect underlying the purported

invention. This range should therefore be considered to be arbitrary.

- No data were available to show that lignosulfonates showed an unexpected effect in comparison with the other surfactants mentioned in D3.
- The technical problem to be solved with respect to D3 could therefore not be formulated in terms of an improvement in chemical stability since the formulation example F3 of D3 was fully stable and the addition of lignosulfonate did not improve the chemical stability. The objective technical problem therefore was merely the provision of an alternative stable sulfonylurea herbicide composition.
- D3 disclosed lignosulfonate within a short list of equivalent and interchangeable surfactants. The selection of lignosulfonate as an alternative to one of the surfactants in the composition of formulation example F3 was therefore trivial for the skilled person.
- The claimed subject-matter did not involve an inventive step in view of D3.

XI. The respondent's case, where relevant to the present decision, may be summarised as follows:

- D29 and table 1 in as far as they relate to the relative decomposition data and table 2 of D30 should not be admitted into the appeal proceedings under Article 12(4) RPBA. The remaining part of document D30 was not objected to.
- A person skilled in the art of formulation chemistry, based on its common general knowledge and the information provided in the patent, would readily be able to implement the invention, i.e.

obtain a composition comprising a single liquid-phase.

- In D3, none of the examples, including formulation example F3, contained any lignosulfonate.
- The data in the patent and in D28 supported the presence of a previously unknown technical effect, namely the stabilisation of sulfonylurea herbicides by lignosulfonates in non-aqueous liquid formulations.
- The objective technical problem was the provision of an alternative stable liquid sulfonylurea herbicide composition.
- D3 simply listed lignosulfonates in a long list of possible non-ionic and anionic surface-active agents for use in the formulation therein. There were no examples containing lignin sulfonates, and no suggestion that they might have a stabilising effect on sulfonylurea herbicides. None of the cited art disclosed such a technical effect.
- In line with the opposition division's decision, the subject-matter claimed in the patent was inventive over the cited prior art.

XII. The parties' requests were the following:

- The appellant requested that the decision under appeal be set aside and that the patent be revoked.
- The respondent requested that the appeal be dismissed (main request), or alternatively, that the patent be maintained in amended form on the basis of one of the sets of claims of auxiliary requests 1 to 7 filed with the reply to the statement of grounds of appeal.

Reasons for the Decision

1. Admittance of D29 and table 1 in as far as they relate to the relative decomposition data and table 2 of document D30

1.1 The appellant filed documents D29 and D30 as experimental evidence with its statement setting out the grounds of appeal.

D29 was submitted in relation to sufficiency of disclosure and inventive step.

Table 1 as far as it relates to the relative decomposition data and table 2 of D30 were submitted with respect to inventive step.

1.2 Pursuant to Article 12(4) RPBA the board has the power to hold inadmissible *inter alia* facts and evidence which could have been presented or were not admitted in the first instance proceedings even if they were presented with the statement of grounds of appeal and the requirements of Article 12(2) RPBA are met.

The board considers that the experimental data presented in D29 relating to sufficiency of disclosure and inventive step and the part of the experimental data of D30 relating to inventive step could and should have been filed during the proceedings before the opposition division:

In point 15 of the reply to the notice of opposition dated 31 July 2013 the respondent had submitted that no evidence had been presented to support the objections

of lack of sufficiency of disclosure raised by the appellant in the notice of opposition.

Furthermore, the opposition division in the communication accompanying the summons to oral proceedings dated 17 March 2014 had expressed its preliminary opinion that the invention was sufficiently disclosed in the patent as granted (pages 4 and 5 of the annex).

Lastly, the respondent had filed document D28 in support of inventive step with its reply to the notice of opposition. In its communication accompanying the summons to oral proceedings, the document was considered by the opposition division as providing such support in evaluating inventive step (page 6 of the annex).

The appellant thus could and should have challenged the respondent's submissions regarding sufficiency of disclosure and inventive step in the proceedings before the opposition division, i.e. at the very latest after issuing the communication accompanying the summons to attend oral proceedings before the opposition division. Waiting for the opposition division's decision before filing the relevant experimental data of D29 and D30 cannot be considered a legitimate reaction of the appellant to a new situation that had not existed before issuance of the decision or occurred only late in the proceedings before the opposition division. Having regard to the development of the case before the opposition division and the content of the file as specified above, the appellant could also not have objectively been surprised by the outcome of the proceedings before the opposition division to the effect that the patent would be maintained as granted.

Consequently, the board considers that filing the whole document D29 and the part of table 1 relating to the relative decomposition data and table 2 of D30 cannot be a reaction to the opposition division's decision and that they could and should have been submitted during opposition proceedings.

1.3 The appellant's arguments cannot be accepted.

Prima facie relevance is not mentioned in Article 12(4) RPBA and is therefore not necessarily a criterion when considering the admittance of facts or evidence filed with the statement of grounds of appeal. The decisive issue is thus whether a fact or evidence could and should have been presented before the opposition division (see also decisions T 724/08, reasons 3.3 and 3.4, T 432/12, reasons 1.3 and T 1314/12, reasons 7). As set out above, the board considers that the parts of the documents D29 and D30 specified above could and should have been presented before the opposition division.

The fact that the respondent did have enough time to consider the experimental data and would not have been disadvantaged in view of the submission with the statement of grounds of appeal and the pendency time of the appeal proceedings is irrelevant in the present case. As expressed above, the essential point is whether the documents could and should have been presented at an earlier stage.

The reference by the appellant to the public interests of having only valid patents upheld is not the essential issue with regard to admitting a late-filed fact or evidence into appeal proceedings. In fact, albeit in the context of whether Article 84 EPC can be invoked against an ambiguity already present in the

granted claims, the Enlarged Board of Appeal in decision G 3/14 (OJ EPO 2015, A102) stated in point 80(i) of the reasons:

"The Enlarged Board of course accepts that ideally only valid patents should be granted and maintained. However, the Enlarged Board cannot go as far as the submission [...], citing G 1/84 (OJ EPO 1985, 299), at point 3 of the Reasons, that 'the elaborate provisions in the EPC for substantive examination and opposition are designed to ensure that only valid European patents should be granted and maintained in force' by the EPO, not least because the Enlarged Board added '... so far as it lies within the power of the European Patent Office to achieve this'. Opposition proceedings are not designed as a procedure for generally amending (or revoking) patents which contain any kind of defect."

- 1.4 Considering the preceding points, the whole of document D29 and the part of table 1 relating to the relative decomposition data and table 2 of D30 were not admitted into the appeal proceedings according to Article 12(4) RPBA.
2. The remaining data of table 1 of D30
 - 2.1 The remaining data of table 1 of D30 relate to the density measured (1.0375 g/ml) and the concentrations expressed in g/kg and wt% and address the question of whether the amounts in D3 were as required by claim 1. These data are considered by the board to be a reaction to the respondent's submission during oral proceedings before the opposition division that the formulations of D3 did "not comprise amounts that fall in the

claims" (last sentence of the fifth paragraph on page 2 of the minutes).

In view of the above, and since during the oral proceedings before the board the respondent confirmed that it did not object to the admission of the remaining part of document D30, the data of table 1 of D30 relating to the density measured, and the concentrations expressed in g/kg and wt% were considered by the board as part of the appeal proceedings in accordance with Article 12(2) and (4) RPBA.

Main request (claims as granted)

3. The ground for opposition under Article 100(b) EPC - sufficiency of disclosure

3.1 Claim 1 of the patent requires one single liquid phase and the presence of three mandatory ingredients. More specifically, claim 1 relates to a single liquid-phase herbicide composition comprising by weight:

- (a) from 0.1 to 20% of one or more sulfonylurea herbicides;
- (b) from 0 to 40% of one or more biologically active agents other than sulfonylurea herbicides;
- (c) from 0.1 to 20% of one or more lignosulfonates;
- (d) from 40 to 99.8% of one or more fatty acid esters of C₁ - C₄ alkanols; and
- (e) from 0 to 50% of one or more additional formulating ingredients;

wherein the liquid carrier of the single liquid-phase composition comprises component (d).

Two ingredients are optional: ingredient (b) being one or more biologically active agents other than

sulfonylurea herbicides and ingredient (e) being one or more additional formulating ingredients.

3.2 Several objections of lack of sufficiency of disclosure were raised. The appellant argued that the patent did not sufficiently disclose how to prepare stable compositions when water was present in the claimed compositions, how to dissolve the solid fatty acid esters encompassed by the definition of (d) in claim 1 to prepare a single liquid-phase formulation, how to prepare a composition according to claim 1 without the presence of a surfactant and how to impart stability to every sulfonylurea, i.e. over the whole scope embraced by claim 1.

3.3 The board is not convinced by the appellant's arguments. There is no reason to assume that the invention as defined in claim 1 is insufficiently disclosed. The board accepts that the water content is not limited in claim 1 and in view of dependent claim 11 it can be more than 1 wt%. However, the person skilled in the art would have no incentive to add water, claim 1 requiring a single liquid-phase formulation and a liquid carrier comprising component (d) which is an organic compound. It is common general knowledge to the skilled person that organic compounds are normally immiscible at least with substantial amounts of water.

As submitted by the respondent (XI, *supra*), a person skilled in the art of formulation chemistry is able to prepare a single liquid-phase formulation, based on common general knowledge and the information provided in the patent for each mandatory ingredient (paragraphs [0014]-[0018] for the sulfonylurea herbicide, [0023]-[0029] for the fatty acid esters of C₁-C₄ alkanols,

[0030]-[0033] for the lignosulfonate and the examples of the patent). The skilled person thus has at his disposal either in the description of the patent or on the basis of common general knowledge, adequate information for the preparation of a single liquid-phase composition without involving any trial and error.

Regarding the appellant's argument with the surfactant being essential to the invention (X, *supra*), the description of the patent teaches that "*Typically the compositions of the present invention include one or more surfactants to enable forming an emulsion when the compositions are added to water in a spray tank*" (paragraph [0036]). The patent thus does not teach that the surfactant is essential to achieving stabilisation, but rather that it is only typical when the compositions are added to water in a spray tank. The argument that the stabilisation of a sulfonylurea herbicide composition may not be achieved in the absence of surfactants is therefore not supported by the patent. It is noted in this context that the burden of proof lies with the appellant to show that no stability is achieved in the absence of a surfactant. Each party bears the burden of proof for the facts it alleges (Case Law, 8th edition 2016, III.G.5.1.1). The question of whether the stabilisation of sulfonylurea herbicides is present or not across the whole scope of claim 1 is not relevant for the assessment of sufficiency of disclosure but rather for inventive step. At least in the absence of an ambiguous term in a claim - and the term "sulfonylurea herbicide" was not argued by the appellant to be ambiguous - an objection of insufficient disclosure cannot legitimately be based on an argument that the patent would not enable a

skilled person to achieve a non-claimed technical effect (see, e.g. T 2001/12, reasons 3.4).

- 3.4 Therefore, the ground for opposition under Article 100(b) EPC does not prejudice the maintenance of the patent.

The grounds for opposition under Article 100(a) EPC

4. Lack of novelty in respect of document D3

- 4.1 Claim 1 relates to a single liquid-phase herbicide composition comprising (mandatorily) by weight:

- (a) from 0.1 to 20% of one or more sulfonylurea herbicides;
 - (c) from 0.1 to 20% of one or more lignosulfonates;
- and
- (d) from 40 to 99.8% of one or more fatty acid esters of C₁ -C₄ alkanols.

The liquid carrier of the single liquid-phase composition comprises component (d).

- 4.2 The appellant (X, *supra*) submitted that D3 disclosed the subject-matter of claim 1 in the combination of formulation example F3 and paragraph [0006].

- 4.3 D3 discloses in formulation example F3 a composition comprising 360 g/l of a mixture consisting of "Compound of formula I" and pretilachlor; 51 g/l of bensulfuron methyl; 150 g/l of ethoxylated tristyrylphenol sulfate, dodecylbenzene sulfonate and castor oil ethoxylate 18EO; and rapeseed oil methyl ester as a remainder to make up 1 liter.

- 4.4 Bensulfuron methyl is a sulfonylurea herbicide according to feature (a) of claim 1 of the patent. Rapeseed oil methyl ester represents fatty acid esters

of C₁ -C₄ alkanols according to feature (d) of claim 1 of the patent. During the oral proceedings a common ground between the parties was that the amount of sulfonylurea herbicides and the amount of rapeseed oil methyl ester in the composition of formulation example F3 of D3 fall within the ranges required by claim 1 (0.1 to 20wt.% for feature (a) and 40 to 99.8 wt.% for feature (d)).

Considering this, the composition of claim 1 differs from that of formulation example F3 in that it additionally comprises 0.1 to 20 wt% of one or more lignosulfonates (component (c) of claim 1).

- 4.5 The appellant argued that, starting from formulation example F3 of D3, the skilled person only needed to select lignosulfonate from the list of paragraph [0006] of D3 to arrive at a composition according to granted claim 1.
- 4.6 The board notes in this respect that the relevant criterion for examining novelty is whether the cited document explicitly or implicitly contains a direct and unambiguous disclosure of the claimed invention.

According to the Enlarged Board decision G 2/88 (OJ EPO 1990, 93, reasons 10) "*a line must be drawn between what is in fact made available, and what remains hidden or otherwise has not been made available. In this connection the distinction should also be emphasised between lack of novelty and lack of inventive step: information equivalent to a claimed invention may be 'made available' (lack of novelty), or may not have been made available but obvious (novel, but lack of inventive step), or not made available and not obvious (novel and inventive)*".

4.7 The board is of the view that there is no teaching or indication in D3 to combine the disclosure of formulation example F3 with one of the ingredients of paragraph [0006], or more specifically to modify this disclosure of formulation example F3 by the inclusion of one of the ingredients of paragraph [0006]. In the absence of such a teaching or indication, it is not permissible to combine the disclosure of formulation example F3 with the disclosure of paragraph [0006].

Therefore, it does not directly and unambiguously follow from D3 that the composition of formulation example F3 comprises 0.1-20 wt% of one or more lignosulfonates.

4.8 Hence, novelty pursuant to Article 54 EPC is acknowledged in view of the disclosure of D3.

5. Inventive step

5.1 The invention

The invention as defined in granted claim 1 concerns a herbicide composition as defined above (4.1, *supra*).

The gist of the invention lies in the provision of stable liquid formulations of sulfonylurea herbicides (paragraphs [0001], [0004], [0030] and [0042]).

5.2 The closest prior art

Both parties referred to D3, particularly formulation example F3 as the closest composition for the subject-matter of granted claim 1.

In the same way as the patent, D3 aims to provide a non-aqueous herbicidal composition comprising *inter alia* a sulfonylurea herbicide (claim 1 of D3), which

remains protected from decomposition over a long period of time (paragraph [0014] of D3). The board therefore agrees that D3 is a suitable starting point for the assessment of inventive step.

5.3 Distinguishing features

As set out above in the context of novelty, the subject-matter of claim 1 differs from the composition of formulation example F3 of D3 in the presence of 0.1-20 wt% of one or more lignosulfonates.

5.4 Formulation of the technical problem

Table 1 of the patent shows that the composition of example 1 comprising a lignosulfonate in the claimed amount exhibits a lower relative decomposition (0% after 1 week at 40°C) compared to the composition of comparative example 1 comprising the same ingredients as the ones of example 1 but no lignosulfonate (18.2% of relative decomposition after 1 week at 35°C).

Table 2 of D28 shows the same result when the compositions of examples 18 and 18A (2.9% and 2.4% of relative decomposition after 8 weeks, respectively) are compared to the composition of comparative example CE2 comprising no lignosulfonate (5.3% of relative decomposition) or when the composition of example 19 (6.2% of relative decomposition) is compared to the composition of comparative example CE4 comprising no lignosulfonate (11.4% of relative decomposition).

Both parties agreed during the oral proceedings that in view of the statement in paragraph [0014] of D3 "*The compositions according to the invention have the great advantage that they [...], and that they remain*

protected from decomposition over a longer period of time", also the composition of formulation example F3 can be considered to be stable even though it does not comprise any lignosulfonate.

Therefore, the objective technical problem is the provision of an alternative stable liquid sulfonylurea herbicide composition.

5.5 Obviousness of the solution

5.5.1 D3 discloses in paragraph [0006] a list of various surfactants ("*surface-active substance*") and in paragraph [0013] a list of preferred surfactants ("*... and as the surface-active substance a mixture of a non-ionic with an anionic compound selected from castor oil ethoxylate, dodecylbenzene sulfonate, ethoxylated tristyrylphenol sulfate and oleyl polyglycol ether.*"). The latter paragraph represents a preferred embodiment.

5.5.2 Considering the above passages of D3 and particularly the passage of paragraph [0013], the board sees no reasons why the skilled person would have chosen a lignosulfonate to provide an alternative **stable** composition. D3 does not teach how to achieve the stability referred to in paragraph [0014]. Thus, it is not clear which ingredient in the composition of formulation example F3 is essential to the stability of the composition. The skilled person would thus not have known which of the components in the composition of formulation example F3 needed to be partially or completely replaced to arrive at an alternative stable composition. If anything, the skilled person would have replaced one of the surfactants in formulation example F3 with an equivalent one and thus any of the preferred

surfactants of paragraph [0013] of D3. Since these are different from lignosulfonates, the skilled person would not have arrived at the subject-matter of claim 1.

- 5.5.3 The board acknowledges that paragraph [0006] of D3 mentions lignosulfonate ("lignin sulfonate") as a preferred non-ionic surface-active substance. However, while this paragraph does not refer to the ingredients of formulation example F3, paragraph [0013] does. More specifically, paragraph [0013] refers to the same sulfonylurea herbicide (bensulfuron), the same grass herbicide ("*Compound of formula I*") and the same fatty acid ester (rapeseed oil methyl ester). Hence, when starting from formulation example F3 and looking for an alternative, the skilled person would have taken paragraph [0013] rather than paragraph [0006] into account.
- 5.6 The appellant's arguments regarding the breadth of claim 1 (X, *supra*), namely that the stability as set out above is not achieved over the whole scope of the claims and that the stability is only achieved in the presence of surfactants cannot be accepted in the absence of evidence to the contrary. The burden of proof lies with the appellant to show that the stability is not achieved by every composition encompassed by claim 1.
- 5.7 Based on the above considerations, the board comes to the conclusion that with regard to the cited prior art, it would not have been obvious to the skilled person to modify the sulfonylurea herbicide composition of D3 so as to arrive at the composition as defined in granted claim 1.

Therefore, the subject-matter of claim 1, and by the same token all of the remaining claims of the main request involve an inventive step pursuant to Article 56 EPC.

5.8 The board therefore comes to the conclusion that the grounds for opposition under Article 100(a) EPC do not prejudice the maintenance of the patent as granted.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated