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**Datasheet for the decision
of 29 September 2023**

Case Number: T 0391/20 - 3.3.02

Application Number: 11718836.7

Publication Number: 2563115

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A01N43/90, A01N25/10

Language of the proceedings: EN

Title of invention:

STABILIZED AGRICULTURAL OIL DISPERSIONS

Patent Proprietor:

Dow AgroSciences, LLC

Opponents:

BASF SE
Rotam Limited

Headword:

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

Novelty
Inventive step

Decisions cited:

T 0405/14

Catchword:



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Case Number: T 0391/20 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 29 September 2023

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
13 December 2019 concerning maintenance of the
European Patent No. 2563115 in amended form.**

Composition of the Board:

Chairman	M. O. Müller
Members:	P. O'Sullivan
	L. Bühler

Summary of Facts and Submissions

- I. The appeals of the patent proprietor and both opponents 1 and 2 lie from the decision of the opposition division according to which European patent 2 563 115 in amended form and the invention to which it relates were found to meet the requirements of the EPC.
- II. According to the contested decision, the set of claims of the then main request (claims as granted) and the then auxiliary request 1 lacked novelty. The set of claims of auxiliary request 2 was found to be allowable.
- III. The following documents *inter alia* were cited by the parties in opposition proceedings:
- D2: US 5,573,583
 - D7: WO 01/30156 A1
 - D19: WO 2008/155108 A2
 - D22: Product Fact Sheet, "Calsogen[®] 4814"
 - D23: Information concerning "Atlox 4838B"
 - D24: Information on "Itineris[®]"
 - D31: Safety data sheet for "SERMUL EA 88"
 - D32: EP 0 107 107 A1
 - D36: Product description, "Atlox[™] 4912-SF"
- IV. With its reply to the opponents' appeals, the patent proprietor submitted the following document:
- D39: "Co-formulants in authorised plant protection products", Bundesamt für Verbraucherschutz und Lebensmittelsicherheit.

- V. With the letter dated 2 August 2021, the patent proprietor submitted the following documents:
- Declaration of Mei Li, dated 26 April 2021
 - Mei Li, *curriculum vitae*
- VI. With letter dated 25 August 2023, opponent 2 submitted the following documents:
- Declaration of Aiyun Yin, dated 17 August 2021
 - Aiyun Yin, *curriculum vitae*
- VII. With the letter dated 26 September 2023, opponent 1 submitted the following documents:
- D41: Römpp Chemie Lexikon (1991), "4-Methyl-1,3-Dioxolan"
 - D42: Bentone 38[®], datasheet
- VIII. In a communication pursuant to Article 15(1) RPBA sent in preparation for oral proceedings, the board *inter alia* expressed the preliminary view that the subject-matter of claim 1 of the main request and auxiliary request 1 lacked novelty.
- IX. Oral proceedings by videoconference took place as scheduled on 29 September 2023 in the presence of all parties.
- X. Requests relevant to the present decision

The patent proprietor requested that the contested decision be set aside and that the patent be maintained on the basis of the set of claims of the main request (claims as granted), or alternatively on the basis of the first auxiliary request filed by letter dated

2 January 2019, or the second to twenty-sixth auxiliary requests submitted with the reply to the opponents' appeals.

Both opponents requested that the contested decision be set aside, and that the patent be revoked in its entirety.

Both opponents furthermore requested that the sets of claims of the fourth to twenty-sixth auxiliary requests not be admitted into appeal proceedings.

Opponent 2 also requested that the Li declaration and the annexed CV submitted by the patent proprietor not be admitted into the proceedings.

XI. For the full text of independent claim 1 of the main request, and an explanation of the amendments to the respective claim 1 of the second to twenty-sixth auxiliary requests, reference is made to the reasons for the decision, below.

XII. For the relevant party submissions, reference is made to the reasons for the decision, below.

Reasons for the Decision

Main request (patent as granted) - Novelty, Articles 100(a) and 54 EPC

1. Claim 1 of the main request reads as follows:

A stable oil dispersion composition consisting essentially of:

a) an organic solvent comprising, with respect to the total composition, from 200 g/L to 999 g/L;

b) a polymer or oligomer capable of hydrogen bonding selected from polyethers, polyalcohols, polyamines, polyphenols, polyacrylic acids, polyvinyl ethers, polyvinyl ketones, polyvinyl heterocyclic compounds, polycarboxylic acid vinyls, modified celluloses, polysaccharides, polyamino acids, and co-polymers and oligomers thereof, comprising, with respect to the total composition, from 1 g/L to 200 g/L;

c) a dispersed active ingredient selected from insecticides, herbicides and fungicides comprising, with respect to the total composition, from 1 g/L to 700 g/L;

d) a clay or silica type rheology modifier comprising, with respect to the total composition, from 1 g/L to 200 g/L; and

e) at least one surfactant comprising, with respect to the total composition, from 1 g/L to 600 g/L,

wherein the composition does not comprise a protic solvent and the organic solvent comprises at least 70

percent by weight of a water immiscible, aprotic organic chemical and no more than 30 percent by weight of a polar aprotic organic chemical."

1.1 The opponents submitted that the subject-matter of claim 1 lacked novelty *inter alia* vis à vis documents D2 and D19.

1.2 Novelty vis à vis D2

Patent document D2 concerns the stabilisation of suspensions of relatively insoluble pesticides in organic solvents, in particular by using combinations of selected polymers and protic solvents (column 1, lines 13-15). In column 6, line 63, D2 discloses a control composition comprising "PPG-4025" polymer and absent any water. This composition also comprises the ingredients listed in the table in column 6, lines 30-40. In particular these ingredients include *inter alia*

- "xylenes", an organic solvent according to claim 1, ingredient a),
- "PPG-4025", a polymer according to claim 1, ingredient b),
- "Carbendazim (MBC)", a dispersed active ingredient according to claim 1, ingredient c),
- "Bentone ® 38", a rheology modifier according to claim 1, ingredient d) (see also patent, paragraph [0032]), and
- Atlox ® 3453F, a surfactant according to claim 1, ingredient e).

In the following, this composition is referred to as "the control composition".

- 1.2.1 The opponents submitted that the subject-matter of contested claim 1 lacked novelty over the control composition of D2.
- 1.2.2 In written appeal proceedings, the patent proprietor submitted that the control composition of D2 comprised a protic solvent, contrary to the requirement in claim 1 that the composition does not require a protic solvent. Hence, the subject-matter of claim 1 was novel over D2.
- 1.2.3 The board does not agree. As stated by the opponents, there is no indication in D2 that the control composition comprises a protic solvent. Indeed, in table 2 (column 6) it is indicated that water (a protic solvent) is absent.
- 1.2.4 The patent proprietor argued that a protic solvent was comprised within the commercially available surfactant "Atlox 3453F" (D2, table, column 6, lines 30-40), an ingredient of the control composition. Specifically, according to D32 (page 9, lines 13 to 18), Atlox 3453F was the trade name for a mixture of dodecyl benzene sulfonate calcium salts. Product data sheets D22 - D24 and D31 (disclosing Calsogen 4814, Atlox 4838B, Emcol P 1860 and Sermul EA 88, respectively) showed that salts similar to Atlox 3453F were commonly formulated with an alcoholic (i.e. protic) solvent. This conclusion was supported by the Li declaration. Hence, in the absence of evidence that Atlox 3453F did **not** comprise a protic solvent, D2 could not be considered novelty destroying for claim 1.
- 1.2.5 The board does not find this argument convincing. As set out above, product data sheets D22 - D24 and D31 refer to Calsogen 4814, Atlox 4838B, Emcol P 1860 and

Sermul EA 88, respectively, rather than to Atlox 3453F as present in the control composition of D2. The fact that these compositions referred to in D22-D24 and D31, while possibly similar to Atlox 3453F, are formulated with alcoholic (i.e. protic) solvents, does not constitute evidence that Atlox 3453F comprises a protic solvent.

1.2.6 Furthermore, the statements provided in the Li declaration do not lead to a different conclusion. Specifically, according to the declaration (points 7 and 8), it was known to the skilled person at the time of the invention that calcium alkylbenzenesulfonate products usually comprised a C₂-C₈ alcoholic (i.e. a protic) solvent. As set out above, being a mixture of dodecyl benzene sulfonate calcium salts, Atlox 3453F is such a product. However, even if this were accepted that such product usually comprise a protic solvent, this does not constitute evidence that specifically Atlox 3453F disclosed in D2 **unambiguously** comprises a protic solvent.

1.2.7 In the same context the patent proprietor also argued that the burden of proof in demonstrating that Atlox 3453F did **not** comprise a protic solvent lay with the opponents. Specifically, since many commercially available surfactants used in the compositions of the cited prior art (D22 - D24 and D31) were known to comprise a protic solvent, it was necessary for the opponents to prove that Atlox 3453F in D2 did not comprise a protic solvent. The mere fact that D2 did not explicitly mention the presence of protic solvents in the control composition was not enough to deny the novelty of the subject-matter of contested claim 1.

- 1.2.8 The board disagrees with this analysis. Claim 1 specifically requires that the composition does not comprise a protic solvent (claim 1, line 44).
- 1.2.9 As set out above and not disputed by the patent proprietor, D2 does not explicitly disclose the presence of a protic solvent. The patent proprietor's assertion that protic solvent is nevertheless present is thus the opposite of what follows from the explicit disclosure of D2 and equates to an assertion that the presence of protic solvent is an implicit feature of the disclosure of D2. Since generally the party that asserts something carries the burden to prove it, it is the patent proprietor who would have had to prove the implicit presence of protic solvent.
- 1.2.10 Incidentally this is not different from the assessment of a feature expressed in a claim in positive terms. Such a feature is considered novel if it is not disclosed in the prior art. If in such a situation, an opponent asserts that this feature nevertheless lacks novelty because it is implicitly present in the prior art, the burden is on the opponent to demonstrate this.
- 1.2.11 Hence, in the absence of evidence to the contrary, the control composition of D2 does not include a protic solvent. This feature therefore does not distinguish the disclosure of the control composition of D2 from the subject-matter of claim 1.
- 1.3 Further distinguishing feature - new allegation - admittance into the proceedings
 - 1.3.1 During oral proceedings, the patent proprietor submitted that the subject-matter of claim 1 was further distinguishing from the control composition of

D2. Specifically, it submitted that the correct amounts of the individual components of the control composition did not simply result from a combination of the amounts provided for the ingredients in column 6, lines 30 to 40 of D2 with the amount of polymer stated in table 1 (D2, column 6, lines 63-64), as had been argued by opponent 1 in opposition proceedings (e.g. notice of opposition of 6 August 2018, page 8). Rather, the amounts of the ingredients in the table of D2, column 6 lines 30 to 40 added up to 100%. In column 6, lines 42 to 45, it was stated that "the exact composition of the sample is given by reducing the medium (Halso 99 and Xylenes) proportionately to compensate for the addition of water and polymer". Therefore, by proportionally reducing the amount of "medium" present in the control composition, one did not unambiguously arrive at a composition comprising the amounts required by contested claim 1. In particular, after carrying out said reduction, the organic solvent (ingredient a) was present in an amount of less than the claimed lower limit of 200 g/L, and thus represented a further distinguishing feature of claim 1 vis à vis the control composition of D2. This submission is hereinafter referred to as the "new allegation with regard to D2".

- 1.3.2 Both opponents requested that the new allegation with regard to D2 not be admitted into the proceedings.
- 1.3.3 The patent proprietor conceded that the new allegation with regard to D2 was submitted for the first time during oral proceedings before the board.
- 1.3.4 The admittance of the new allegation with regard to D2 into appeal proceedings is therefore governed by Article 13(2) RPBA.

According to this provision, any amendment to a party's appeal case made after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

1.3.5 The patent proprietor submitted that with regard to the disclosure of D2, it had taken the arguments of the opponents submitted in opposition proceedings at face value, and had only become aware of the further distinguishing feature addressed above while preparing for the oral proceedings before the board.

1.3.6 The board is of the following view.

The justification required by Article 13(2) RPBA must relate to procedural aspects of the appeal proceeding causing the late submission of the new allegation with regard to D2. Since in this regard there were no such aspects, the justification provided cannot be accepted.

Moreover, the patent proprietor should not only have filed its new allegation earlier in the appeal proceedings, but in fact should have done so in reply to the notice of opposition in which the calculations the patent proprietor now considers incorrect were presented.

Furthermore, as stated by the opponents, admitting said new allegation would require the opponents to study it at short notice and react thereto during oral proceedings. This is however not conducive to the fairness of the proceedings and the principle of procedural economy.

- 1.3.7 For each of these reasons, the board decided not to admit the patent proprietor's new allegation with regard to D2 into the appeal proceedings.
- 1.3.8 Consequently, the subject-matter of contested claim 1 lacks novelty over D2.
- 1.4 Novelty vis à vis D19
- 1.4.1 In relation to patent document D19, the opponents submitted, in line with the decision of the opposition division, that the subject-matter of contested claim 1 lacked novelty over the compositions of examples A to E, G to I and K, disclosed in table 1 on page 12.
- 1.4.2 It was uncontested by the patent proprietor that the presence of a protic solvent was not explicitly indicated in D19. The proprietor argued on the basis of document D36 that "Atlox 4912", one of the commercially available products used in the compositions of table 1 (see D19, page 11, lines 6-11), comprised a protic solvent.
- 1.4.3 The board disagrees. As stated by the patent proprietor, D36 is a product brochure for "Atlox 4912-**SF**", which is said therein to be "the solvent free version of Atlox 4912". Hence, this indicates that Atlox 4912 used in the compositions of table 1 of D19 comprised solvent. However, even accepting this, there is no evidence that the specific solvent used is necessarily a protic solvent as alleged by the patent proprietor. In the absence of such evidence, it must be assumed that Atlox 4912, and hence the compositions of table 1 of D19, do not comprise a protic solvent.

- 1.4.4 Furthermore, as set out in relation to D2, the burden of proof in showing that the compositions of D19 comprise a protic solvent lies with the patent proprietor, and has not been discharged.
- 1.4.5 Hence, the subject-matter of contested claim 1 lacks novelty over D19.

First auxiliary request - Novelty, Article 54 EPC

- 2. Claim 1 of the first auxiliary request differs from claim 1 of the main request by the addition of the feature from granted claim 2, namely in component (b),

"wherein said polymer or oligomer comprises polyethylene glycol or polypropylene glycol".

- 2.1 The opponents argued that claim 1 lacked novelty over D2.
- 2.2 It was undisputed by the patent proprietor that "PPG-4025", an ingredient of the control composition of D2, is a polypropylene glycol polymer as required by component b) of claim 1 of the first auxiliary request.
- 2.3 Hence, the feature added to claim 1 of the first auxiliary request compared to claim 1 of the main request does not represent a distinguishing feature over said composition.
- 2.4 For this reason, in addition to the reasons provided for claim 1 of the main request, claim 1 lacks novelty over D2.

Second auxiliary request - Inventive step, Article 56 EPC

3. Claim 1 of the second auxiliary request differs from claim 1 of the main request in that it specifies that the organic solvent component (a) "*includes a water immiscible, aprotic organic chemical and a polar aprotic organic chemical*".

Hence, compared to claim 1 of the main request, the presence in the claimed composition of a polar aprotic organic solvent in no more than 30 percent by weight is no longer optional.

3.1 Closest prior art

- 3.1.1 The opponents argued that the subject-matter of claim 1 lacked inventive step starting from *inter alia* documents D2 or D19 as the closest prior art.

- 3.1.2 The patent proprietor submitted that the closest prior art was represented by document D2, and not D19. Although both D2 and D19 dealt with the physical stabilisation of oil dispersions, only D2 specifically referred to the problem of stabilising a suspension against sedimentation (D2, column 1, lines 41-48).

- 3.1.3 However, the essential question is not whether D2 represents the closest prior art, but rather whether also D19 represents a suitable closest prior art document. In fact, a document selected as the starting point cannot be excluded only because some seemingly more promising item of prior art, such as in the present case (possibly) D2, is available (see T 405/14, point 19).

- 3.1.4 Hence, if D19 is also a suitable closest prior art document, then the claimed subject-matter must also involve an inventive step over D19.
- 3.1.5 D19 deals with the physical stabilisation of oil dispersions (e.g. D19, page 1, line 9; page 5, lines 10-12; denoted "suspensions" in D19). It is hence in a technical field related to that of the present patent, and there is no reason why it cannot serve as a suitable starting point in the assessment of inventive step. This conclusion is in line with the view of the opposition division in the contested decision (point 13.4.1, penultimate paragraph) according to which D19 was seen as the closest prior art.
- 3.2 Distinguishing features and problem solved
 - 3.2.1 It was undisputed that the feature added in claim 1 of the second auxiliary request relative to claim 1 of the main request, i.e. the obligatory presence of a polar aprotic organic solvent, distinguishes the subject-matter of claim 1 from the compositions in table 1 of D19.
 - 3.2.2 It was also undisputed that no specific technical effect associated with this distinguishing feature had been demonstrated, and that the objective technical problem underlying claim 1 was to be formulated as the provision of an alternative stable oil dispersion composition.
- 3.3 Obviousness
 - 3.3.1 The patent proprietor argued that to solve said problem, it would not have been obvious to the skilled person starting at D19 to add a polar aprotic organic

solvent. In particular, D19 taught the skilled person away from amending the solvent system disclosed therein.

- 3.3.2 The board disagrees. As stated by the opponents, although D19 does not mention the use of a polar aprotic solvent, it was not disputed that such solvents were known to the skilled person. The patent proprietor also acknowledged for example that propylene carbonate was a polar aprotic solvent known to the skilled person. Furthermore, as stated by the opponents, polar solvents in general were also known as ingredients in agrochemical oil dispersion formulations (e.g. D7, page 20, point 4).
- 3.3.3 There is no specific instruction or teaching in D19 that such polar solvents may not or cannot be used. The fact that D19 refers to the solution proposed therein in the context only of a base oil or paraffinic solvent or medium (e.g. the passage cited by the patent proprietor in this regard: D19, page 1, lines 24-27 and page 7, lines 29-32) does not indicate that alternative compositions would not be obtained with adjustments to said medium, nor that the skilled person would consider themselves bound to using exclusively water immiscible aprotic solvents.
- 3.3.4 Polar aprotic organic solvents such as propylene carbonate are solvents and are not active components in the oil dispersion composition, and there is hence no reason why their inclusion would not be expected to provide an alternative oil dispersion composition.
- 3.3.5 Indeed, in the view of the board the mere addition of a polar aprotic organic solvent to the compositions of D19 in order to provide an alternative stable oil

dispersion composition is one of many possible arbitrary solutions which the skilled person could arrive at in order to solve the above-mentioned problem.

- 3.3.6 The patent proprietor also argued that while propylene carbonate was a known solvent, it was not known to use it in stable oil dispersions.
- 3.3.7 However, as is evident from the above, even if this were accepted, in the view of the board it is sufficient for propylene carbonate to be known in general as an organic solvent: the context of the known uses is not important.
- 3.4 Consequently, the subject-matter of claim 1 of the second auxiliary request lacks inventive step over D19 in combination with the common general knowledge of the skilled person.

Third auxiliary request - Inventive step, Article 56 EPC

- 4. Claim 1 of the third auxiliary request differs from claim 1 of the second auxiliary request in that the rheology modifier of component (d) is limited to a clay type rheology modifier.
- 4.1 It was undisputed that "Bentonite in powder" used in the examples of D19 (page 12, table 1; see also page 11, line 10) is a clay type rheology modifier.
- 4.2 Consequently, there are no further distinguishing features in claim 1 of the third auxiliary request compared to claim 1 of the second auxiliary request, and the same reasoning and conclusion in relation to inventive step applies.

Hence, the subject-matter of claim 1 of the third auxiliary request lacks inventive step pursuant to Article 56 EPC.

Fourth to twenty-sixth auxiliary requests - Admittance

5. Both opponents requested that the sets of claims of the fourth to twenty-sixth auxiliary requests not be admitted into appeal proceedings.

Since as set out below, none of these claims requests were found to be allowable, it was not necessary for the board to decide on their admittance into the proceedings.

Fourth auxiliary request - Inventive step, Article 56 EPC

6. Claim 1 of the fourth auxiliary request differs from claim 1 of the second auxiliary request in that it is specified in relation to the organic solvent component a) that "*the polar aprotic organic chemical includes ketones, nitriles, sulfoxides, sulfones or alkylene carbonates*".
 - 6.1 As noted above in relation to claim 1 of the second auxiliary request, the patent proprietor acknowledged that propylene carbonate, an alkylene carbonate and thus a polar aprotic organic solvent according to contested claim 1, was known to the skilled person as a solvent. Hence, as set out above in relation to claim 1 of the second auxiliary request, the provision thereof as a solution to the objective technical problem of providing an alternative stable oil dispersion composition would have been obvious to the skilled person starting from the disclosure in D19.

Hence, the subject-matter of claim 1 of the fourth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Fifth auxiliary request - Inventive step, Article 56 EPC

7. Claim 1 of the fifth auxiliary request is a combination of the respective claim 1 of the first and second auxiliary requests. It therefore includes the limitation in component b) that "*said polymer or oligomer comprises polyethylene glycol or polypropylene glycol*", and that the organic solvent component (a) "*includes a water immiscible, aprotic organic chemical and a polar aprotic organic chemical*".

7.1 Closest prior art

7.1.1 The patent proprietor argued that in relation to claim 1 of this request that D2, and not D19, represented the closest prior art. Specifically, the claimed subject-matter was closer to D2 by virtue of the presence of only a single distinguishing feature, namely the presence of a polar aprotic organic solvent, whereas the claimed subject-matter was additionally distinguished from D19 in the polymer component b).

7.1.2 The board disagrees. As set out above in relation to the second auxiliary request, the relevant question is not whether D2 is the "closest" prior art, but rather whether D19 represents a suitable alternative closest prior art document. If this is the case, then the claimed subject-matter must also involve an inventive step over D19. As set out above in relation to claim 1 of auxiliary request 2, there is no reason to exclude D19 in this regard.

7.2 Distinguishing features

7.2.1 It was undisputed that the two features added to claim 1 of the fifth auxiliary request relative to claim 1 of the main request, i.e. the obligatory presence of a polar aprotic organic solvent in component a) and the presence of a polyethylene glycol or polypropylene glycol polymer in component b), distinguishes the subject-matter of claim 1 from the compositions in table 1 of D19.

7.3 Technical problem solved

7.3.1 As set out for claim 1 of the second auxiliary request, it was undisputed that no specific technical effect was associated with the obligatory presence of a polar aprotic organic solvent.

7.3.2 In relation to the presence of polyethylene glycol or polypropylene glycol polymer in the claimed compositions, the patent proprietor referred to the examples and comparative examples in the patent as evidence of an effect. Specifically, said examples demonstrated that compositions comprising polyethylene glycol or polypropylene glycol polymer and a polar aprotic organic solvent (polypropylene carbonate; samples B, C, D and E in tables 2 and 3 of the patent) demonstrated less particle sedimentation than the corresponding control comparison sample with no polymer added (sample A in tables 2 and 3). Hence, a technical effect could be attributed to the distinguishing features of contested claim 1 over D19.

7.3.3 The board disagrees. As argued by the opponents during oral proceedings, the compositions of D19 comprise a

trisiloxane polyether polymer (D19, table 1, page 12), while comparative sample A ("no polymer added") in tables 2 and 3 of the patent does not comprise any polymer. Hence, lacking said polymer, comparative sample A of the patent does not represent the compositions of the prior art D19. Hence, even if it were accepted that samples B, C, D and E in tables 2 and 3 of the patent show an improvement compared to sample A, this improvement is not demonstrated to originate in the distinguishing features vis à vis the examples in table 1 of D19, but could also be due to the absence of a trisiloxane polyether polymer in sample A. Hence, no technical effect can be attributed to the distinguishing features of contested claim 1 with regard to D19.

7.3.4 Consequently, the objective technical problem remains the same as set out for claim 1 of the second auxiliary request, namely the provision of an alternative stable oil dispersion composition.

7.4 Obviousness

7.4.1 The patent proprietor argued that to solve the problem of providing an alternative stable oil dispersion composition, it would not have been obvious to the skilled person starting at D19 to use a polyethylene glycol or polypropylene glycol polymer in addition to a polar aprotic organic solvent.

7.4.2 The board disagrees. As stated by the opponents (e.g. letter of opponent 2 dated 25 August 2023, page 10, first paragraph) and reiterated at oral proceedings, the use of polyethylene or polypropylene glycol in oil dispersion compositions was known from the prior art - for example D2 (column 4, lines 20-21; claim 8).

Furthermore, contested claim 1 is formulated in an open manner as a composition comprising the listed components. Hence, to arrive at the subject-matter of contested claim 1 it is not necessary to replace the organosilane polymer present in the compositions of D19. Rather, it is only necessary to add either a polyethylene glycol or polypropylene glycol polymer.

- 7.4.3 However, the addition of components known in the technical field without any effect is to be considered as an arbitrary choice among components which the skilled person would have had at their disposal. Such an arbitrary choice is within the routine abilities of the skilled person.

Consequently, the subject-matter of claim 1 of the fifth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Sixth auxiliary request - Inventive step, Article 56 EPC

8. Claim 1 of the sixth auxiliary request differs from claim 1 of the third auxiliary request in that it is specified that the polar aprotic organic solvent includes propylene carbonate.
- 8.1 This feature is a distinguishing feature with regard to D19. However, as set out above for claim 1 of the second auxiliary request, the addition of a polar aprotic organic solvent such as propylene carbonate to the medium of D19 in order to provide an alternative stable oil dispersion composition is one of many possible arbitrary solutions which the skilled person could arrive at to provide such an alternative. There is no need for D19 to contain an incentive for the

skilled person to select the specific solution of contested claim 1.

- 8.2 Consequently, for this reason, in addition to the reasons provided for claim 1 of the third auxiliary request, contested claim 1 lacks inventive step pursuant to Article 56 EPC.

Seventh auxiliary request- Inventive step, Article 56 EPC

9. Claim 1 of the seventh auxiliary request comprises a combination of the amendments to claim 1 of the first auxiliary request, namely that in component b) *"said polymer or oligomer comprises polyethylene glycol or polypropylene glycol"*, and claim 1 of the third auxiliary request, namely in component d) wherein the rheology modifier is a clay type rheology modifier, and that the organic solvent component (a) *"includes a water immiscible, aprotic organic chemical and a polar aprotic organic chemical"*
- 9.1 As set out in relation to the respective claim 1 of the first and third auxiliary requests, the first and the last of these three features distinguish the subject-matter of present claim 1 from D19.
- 9.2 As stated above in relation to the fourth auxiliary request, no technical effect is associated with the presence of polyethylene glycol or polypropylene glycol polymer in the claimed compositions, and this feature cannot support the presence of an inventive step over D19.
- 9.3 Furthermore, as set out above, the above amendments to claim 1 of the third auxiliary request do not render said claim inventive over D19.

9.4 It follows that the combination of these amendments in claim 1 of the seventh auxiliary request also cannot lead to the acknowledgement of inventive step for this claim, for the same reasons provided above.

9.5 Consequently, claim 1 of the seventh auxiliary request lacks inventive step pursuant to Article 56 EPC.

Eighth auxiliary request- Inventive step, Article 56 EPC

10. Claim 1 of the eighth auxiliary request differs from claim 1 of the seventh auxiliary request in that it is specified that the polar aprotic organic solvent includes propylene carbonate.

10.1 This feature distinguishes the subject-matter of claim 1 from D19. However, as set out above in relation to claim 1 of the second auxiliary request, this limitation does not render the subject-matter of claim 1 of the eighth auxiliary request inventive.

10.2 Consequently, contested claim 1 lacks inventive step pursuant to Article 56 EPC.

Ninth auxiliary request - Inventive step, Article 56 EPC

11. Claim 1 of the ninth auxiliary request differs from claim 1 of the main request in that the dispersed active ingredient (c) is further defined as follows:

"wherein the dispersed active ingredient comprises at least one herbicide selected from flumetsulam, metosulam, chloransulam, florasulam, diclosulam, penoxsulam, pyroxsulam, imazethabenz, imazethapyr, imazaquin, imazamox, flucarbazone, propoxycarbazone,

amicarbazone, and compounds of the following generic structures and their derivatives,



wherein Ar is a polysubstituted phenyl group, R is H or halo and X is halo or alkoxy;"

11.1 Closest prior art

11.1.1 The patent proprietor submitted that the now restricted claimed group of dispersed active ingredients disqualified D19 as the closest prior art, as it related to sulfonylurea dispersed active ingredients only.

11.1.2 The board disagrees. Even though D19 does not disclose the active ingredients listed in contested claim 1, it nevertheless discloses oil dispersions comprising dispersed active ingredients. As set out above, it is in a similar technical field to the subject-matter of claim 1, and there is hence no reason to exclude it as a starting point in the assessment of inventive step.

11.2 Technical problem solved

11.2.1 As set out above, it is undisputed that D19 fails to disclosed any of the active ingredients listed in claim 1, component c).

11.2.2 As stated by the opponents and not disputed by the patent proprietor, the technical effect of this difference is that an alternative oil dispersion composition is provided.

11.2.3 The objective technical problem may therefore be formulated in the same way as for claim 1 of the second to eighth auxiliary requests, namely as the provision of an alternative stable oil dispersion composition.

11.3 Obviousness

As stated by the opponents, selecting an active agent to formulate into an oil dispersion depends on the spectrum of activity desired - the choice of active agent is carried out with a particular result, or a particular target in mind. Hence, in contrast to the arguments of the patent proprietor, there is no reason to believe that the oil dispersions disclosed in D19 would not be suitable for preparing compositions comprising the active ingredients listed in claim 1, and hence no reason why the skilled person would not look to substitute the sulfonyleurea active agents disclosed in D19 with the active agents listed in claim 1 in order to solve the technical problem set out above.

11.4 Consequently, claim 1 of the ninth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Tenth to thirteenth auxiliary requests - Inventive step, Article 56 EPC

12. The respective claim 1 of each of these auxiliary requests results from a combination of claim 1 of the ninth auxiliary request with claim 1 of the first, third, seventh or eighth auxiliary requests, respectively.

12.1 Comprised within claim 1 of one or more higher ranking requests set out above, the respective amendments to

claim 1 of each of these requests compared to the main request have already been addressed above in the context of inventive step.

12.2 The patent proprietor argued that the conclusion in respect of inventive step for the individual amendments addressed above in relation to claim 1 of higher ranking requests, i.e. the limitation

- to polyethylene glycol or polypropylene glycol in component b),
- to specific active agents in component c),
- to a clay type rheology modifier in component d), and
- to necessarily include a polar protic organic solvent in component a), or to limit the latter specifically to propylene carbonate,

did not necessarily apply to the **combination** of these features in the respective claim 1 of the tenth, eleventh, twelfth and thirteenth auxiliary requests. Furthermore, the number of added distinguishing features in combination further disqualified D19 as the closest prior art.

12.2.1 The board disagrees. Firstly, as already addressed above, D19 relates to a similar technical field to the claimed subject-matter and hence is to be regarded as a suitable closest prior art. Furthermore, as argued by the opponents at oral proceedings, an inventive step can be accepted for a combination of individual distinguishing features which in isolation do not involve an inventive step, only if the combination in itself leads to a specific technical effect. However, there is no evidence of any technical effect in relation to any of said distinguishing features,

neither alone nor in combination. Rather, in the present situation, the mere addition of said distinguishing features is not in itself sufficient to render the claimed subject-matter non-obvious, in particular because as set out above, each of these distinguishing features represents an arbitrary (and hence obvious) modification of the examples of D19.

12.3 Consequently, the subject-matter of the respective claim 1 of the tenth, eleventh, twelfth and thirteenth auxiliary requests lacks inventive step pursuant to Article 56 EPC.

Fourteenth auxiliary request - Inventive step, Article 56 EPC

13. Claim 1 of the fourteenth auxiliary request differs from claim 1 of the ninth auxiliary request in that the dispersed active ingredient c) is further limited to comprise a narrower list of compounds, namely

"at least one herbicide selected from pyroxsulam and compounds of the following generic structures and their derivatives,



wherein Ar is a polysubstituted phenyl group, R is H or halo and X is halo or alkoxy;"

13.1 As for claim 1 of the ninth auxiliary request, the patent proprietor argued that D19 was disqualified as the closest prior art and that the features of the claimed composition in combination were not obvious to the skilled person.

13.2 However, the board regards D19 as a suitable closest prior art, for the same reasons as provided for claim 1 of the ninth auxiliary request, above.

13.3 Furthermore, despite the list of specific dispersed active ingredients being limited compared to claim 1 of the ninth auxiliary request, the same conclusions apply for the same reasons. Specifically, there is no reason to believe that the oil dispersions disclosed in D19 would not be suitable for preparing compositions comprising different active ingredients, and hence no apparent reason why the skilled person would not look to substitute the sulfonylurea active agents disclosed in D19 with the active ingredients listed in component c) of claim 1.

13.4 Consequently, for this reason, in addition to the reasons provided above for claim 1 of the ninth auxiliary request, the subject-matter of claim 1 of the fourteenth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Fifteenth to eighteenth auxiliary requests - Inventive step, Article 56 EPC

14. The respective claim 1 of each of these auxiliary requests results from a combination of claim 1 of the fourteenth auxiliary request with claim 1 of the first, third, seventh or eighth auxiliary requests, respectively.

14.1 Claim 1 of each of these requests lacks inventive step for the same reasons provided for claim 1 of the fourteenth auxiliary request above, in combination with the reasons provided for claim 1 of the tenth to

thirteenth auxiliary requests, respectively, which apply to these requests mutatis mutandis.

14.2 As for the subject-matter of the tenth to thirteen auxiliary requests, the patent proprietor argued that the conclusion in respect of inventive step for the individual amendments addressed above in relation to claim 1 of higher ranking requests did not necessarily apply to the **combination** of these features in the respective claim 1 of the fifteenth to eighteenth auxiliary requests. Furthermore, the number of added distinguishing features in combination further disqualified D19 as the closest prior art.

14.2.1 The board disagrees for the same reasons as provided for the tenth to thirteenth auxiliary requests. In particular, there is no evidence of any technical effect in relation to any of the distinguishing features of the respective claim 1 of each request, neither alone nor in combination.

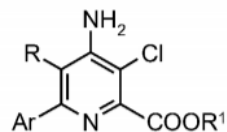
14.3 Consequently, the subject-matter of the respective claim 1 of the fifteenth, sixteenth, seventeenth and eighteenth auxiliary requests lacks inventive step pursuant to Article 56 EPC.

Nineteenth auxiliary request - Inventive step, Article 56 EPC

15. Claim 1 of the nineteenth auxiliary request differs from claim 1 of the fourteenth auxiliary request by the addition of the following text:

"wherein the composition further comprises at least one of an additional herbicide or herbicide safener either dispersed or dissolved in the organic solvent, wherein

the additional herbicide is fluroxypyr-meptyl or an arylpyridine carboxylic acid or ester of the formula



wherein Ar is a polysubstituted phenyl group, R is H or halogen and R¹ is H or C₁-C₈ alkyl and the herbicide safener is cloquintocet-mexyl,"

Hence, claim 1 requires the presence of either an additional herbicide having a defined formula, or the presence of cloquintocet-mexyl, a herbicide safener.

15.1 It was not disputed that compared to claim 1 of the fourteenth auxiliary request, this represents a further distinguishing feature of claim 1 vis à vis the compositions disclosed in the examples of D19.

15.2 The board is of the view that D19 remains a suitable closest prior art, for the same reason as provided above *inter alia* in relation to claim 1 of the fourteenth auxiliary request.

15.3 As stated by the opponents and not disputed by the patent proprietor, there are no technical effects associated with this further distinguishing feature.

The objective technical problem underlying claim 1 therefore remains the provision of an alternative stable oil dispersion composition.

15.4 As argued by the opponents, the solution to this problem would have been obvious to the skilled person. In addition to the reasons provided for the fourteenth auxiliary request, the addition of further pesticides

or a herbicide safener is known to the skilled person as a standard formulating technique. Hence, the skilled person seeking a solution to the above problem would, if desired, see no reason preventing the use of such further compounds in a composition according to the examples of D19.

- 15.5 Consequently, for this reason as well as the reasons provided above for claim 1 of the fourteenth auxiliary request, the subject-matter of claim 1 of the nineteenth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Twentieth to twenty-third auxiliary requests - Inventive step, Article 56 EPC

16. The respective claim 1 of each of these auxiliary requests results from a combination of the amendments to claim 1 of the nineteenth auxiliary request with, respectively, claim 1 of the first, third, seventh and eighth auxiliary requests.

- 16.1 Claim 1 of each of these requests lacks inventive step for the same reasons provided for claim 1 of the nineteenth auxiliary request above, in combination with the reasons provided for claim 1 of the tenth to thirteenth auxiliary requests, which apply to these requests mutatis mutandis.

In particular, an inventive step can be accepted for a combination of individual distinguishing features only if said combination leads to a specific technical effect. However, there is no evidence of any technical effect in relation to any of said distinguishing features set out above, alone or in combination.

16.2 Consequently, the subject-matter of the respective claim 1 of the twentieth, twenty-first, twenty-second and twenty-third auxiliary requests lacks inventive step pursuant to Article 56 EPC.

Twenty-fourth auxiliary request - Inventive step, Article 56 EPC

17. Claim 1 of the twenty-fourth auxiliary request differs from claim 1 of the main request in that

- the upper limit of the amount of the surfactant component (e) is reduced from 600 g/L to 200 g/L, and
- the water immiscible, aprotic organic solvent includes one or more petroleum distillates or halogenated aromatic or aliphatic hydrocarbons.

17.1 The patent proprietor argued that although examples H and I in table 1 of D19 comprised a water immiscible solvent according to claim 1 ("Solvesso 200"), those compositions also comprised surfactant in an amount of 35 wt%, which was above 200 g/L, the upper limit of claim 1.

17.2 This was not disputed by the opponents and the board agrees. Hence, this feature distinguishes the subject-matter of claim 1 from examples H and I of table 1 of D19.

17.3 As argued by the opponents and not disputed by the patent proprietor, there is no evidence that this distinguishing feature gives rise to a technical effect compared to the compositions disclosed in D19.

Consequently, the objective technical problem underlying claim 1 of this request remains the provision of an alternative stable oil dispersion composition.

17.4 As argued by the opponents, the skilled person seeking to provide an alternative to the compositions of D19 would, as just one of the equally obvious arbitrary alternative measures available, simply adjust the amounts of the ingredients comprised therein, including lowering the amount of surfactant to within the range of claim 1. Such an arbitrary adjustment is within the routine abilities of the skilled person.

17.5 Consequently, the subject-matter of claim 1 of the twenty-fourth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Twenty-fifth auxiliary request - Inventive step, Article 56 EPC

18. Claim 1 of the twenty-fifth auxiliary request is a combination of claim 1 of the twenty-fourth auxiliary request with claim 1 of the eighth auxiliary request.

18.1 For the reasons already provided above with regard to claim 1 of those requests, claim 1 of this request lacks inventive step. As stated above in relation to the respective claim 1 of the tenth to thirteenth auxiliary requests, an inventive step can be accepted for a combination of individual distinguishing features only if said combination leads to a specific technical effect. However, there is no evidence of any technical effect in relation to any of said distinguishing features, alone or in combination.

18.2 Consequently, the subject-matter of claim 1 of the twenty-fifth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Twenty-sixth auxiliary request - Inventive step, Article 56 EPC

19. Claim 1 of the twenty-sixth auxiliary request is a combination of claim 1 of the twenty-fifth auxiliary request with claim 1 of the nineteenth auxiliary request.

19.1 For the reasons already provided above with regard to the respective claim 1 of those requests, claim 1 of this request lacks inventive step. In particular, as stated above in relation to the respective claim 1 of the tenth to thirteenth auxiliary requests, an inventive step can be accepted for a combination of individual distinguishing features only if said combination leads to a specific technical effect. However, there is no evidence of any technical effect in relation to any of the distinguishing features, of claim 1 of the twenty-fifth or nineteenth auxiliary requests, either alone or in combination.

19.2 Consequently, the subject-matter of claim 1 of the twenty-sixth auxiliary request lacks inventive step pursuant to Article 56 EPC.

Conclusion

20. Since none of the patent proprietor's claim requests are allowable, the patent is to be revoked.

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:



M. Schalow

M. O. Müller

Decision electronically authenticated