

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 15 May 2019**

Case Number: T 1315/16 - 3.3.06

Application Number: 10167227.7

Publication Number: 2399978

IPC: C11D3/22, C11D3/37, C11D3/43,
C11D17/04

Language of the proceedings: EN

Title of invention:

Stable non-aqueous liquid compositions comprising a cationic polymer in particulate form

Patent Proprietor:

The Procter & Gamble Company

Opponent:

Henkel AG & Co. KGaA

Headword:

Stable non-aqueous composition/Procter & Gamble

Relevant legal provisions:

EPC Art. 52(1), 54, 56, 84, 123(2)
RPBA Art. 12(4), 13(3)

Keyword:

Novelty - main request (no) - auxiliary request 12 (yes)
Late-filed auxiliary request 12 - admitted (yes)
Amendments - added subject-matter (no) - auxiliary request 12
Claims - clarity (yes) -auxiliary request 12
Inventive step - auxiliary request 12 (yes)

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1315/16 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 15 May 2019

Appellant: Henkel AG & Co. KGaA
(Opponent) Henkelstrasse 67
40589 Düsseldorf (DE)

Representative: Henkel AG & Co. KGaA
CLI Patents
Z01
40191 Düsseldorf (DE)

Respondent: The Procter & Gamble Company
(Patent Proprietor) One Procter & Gamble Plaza
Cincinnati, OH 45202 (US)

Representative: Russell, Tim
Venner Shipley LLP
200 Aldersgate
London EC1A 4HD (GB)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 20 April 2016
rejecting the opposition filed against European
patent No. 2399978 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: G. Santavicca
R. Cramer

Summary of Facts and Submissions

I. The appeal lies from the decision of the Opposition Division rejecting the opposition filed against European patent No. 2 399 978, claim 1 of which reads as follows (amendments over claim 1 as originally filed made apparent by the Board):

"1. A non-aqueous liquid composition comprising:
a) a cationic polymer in particulate form; and
*b) a non-aqueous dispersant **selected from the group consisting of: ethanol, glycerol, polyethylene glycol of molecular weight from 100 to 400; and***
*c) **less than 20% by weight of water;***
*wherein the cationic polymer is stably dispersed in the non-aqueous liquid composition **and the non-aqueous liquid composition is encapsulated in a water-soluble or dispersible film.**"*

II. With its grounds of appeal the opponent (hereinafter **Appellant**) filed a new item of evidence, D11 (US 2008/0242579 A1), and objected to *inter alia* that the claimed subject-matter lacked novelty over D1 and inventive step over D4 taken as the closest prior art.

III. With its response dated 9 January 2017, the proprietor (hereinafter **Respondent**) requested not to admit D11, submitted auxiliary requests 1 to 17 and filed further items of evidence as follows:

D12: New Penguin Dictionary of Science, 1998, page 475;

D13: Declaration by Hilde Andriessen on Formulation 1A of D9, dated 9 January 2017;

D14: Declaration by Hilde Andriessen on Example VI of D4, dated 9 January 2017.

IV. At the same time of the Board's preliminary opinion the appellant filed comparative test report D15. Then, in response to the preliminary opinion, it requested not to admit into the appeal proceeding the new documents D12 to D14 nor auxiliary requests 6 to 17.

V. During the oral proceedings the respondent filed BASF Product Datasheet DEHYDOL® LT 7 (D16) and the discussion focused essentially on novelty of claim 1 as granted over D1 (WO 2006/088980 A1); inventive step of claim 1 of auxiliary request 1 starting from either D1 or D4 (EP 1 431 383 A1) as closest prior art; admittance of documents D14 and D15 and of auxiliary requests 6 to 17; compliance of the claims of auxiliary request 12 with Articles 84, 123(2) and 56 EPC.

After the discussion, the respondent declared maintaining only its main request and auxiliary request 12, and it withdrew all other auxiliary requests.

VI. Claim 1 of auxiliary request 12 reads as follows (amendments over claim 1 as granted - underlining - and over claim 1 as originally filed - in bold character - made apparent by the Board):

"1. A non-aqueous liquid composition comprising:
a) a cationic polymer in particulate form; and
*b) a non-aqueous dispersant **selected from the group consisting of: ethanol, glycerol, polyethylene glycol of molecular weight from 100 to 400; and***
*c) **less than 20% by weight of water;***
*wherein the cationic polymer is stably dispersed in the non-aqueous liquid composition **and the non-aqueous***

liquid composition is encapsulated in a water-soluble or dispersible film, and the particulate form is (i) a solid that is completely free of water and/or other solvent or (ii) a solid that is partially hydrated and/or solvated."

VII. The final requests of the parties were as follows:

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, or alternatively that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the claims of auxiliary request 12 filed with the reply to the statement of grounds of appeal.

Reasons for the Decision

1. *Admissibility of the new items of evidence*

1.1 As D11, D12 and D13 were no longer relied upon during the oral proceedings, the Board did not need to decide on their admissibility into these proceedings.

1.2 D14 concerns the reworking of Example VI of D4, which however is neither exact (insofar as a nonionic surfactant with a lower average carbon chain length than that illustrated by D4 had been used) nor complete, so that D14 is not relevant, hence not admissible.

1.3 As evidenced by the data sheet D16, also the alleged repetition of Example VI of D4 in D15 used a nonionic surfactant of a broader average carbon chain length, so

that D15 too is not an exact reproduction of Example VI of D4. Already for this reason, D15 is not relevant nor admissible.

1.4 D16, which was filed in reaction to the filing of D15, in order to show the exact composition of an ingredient used in D15, is therefore relevant and its late filing is thus justified. Its admissibility is thus not at stake.

2. *Construction of claim 1 as granted*

2.1 The respondent *argued* that the feature "*in particulate form*", relating to the cationic polymer present in a liquid laundry composition, meant a solid (phase) for the skilled person reading the claim in the context of the patent (in particular paragraphs [0006] "stable suspension", [0007] "particles", "particulate dispersion", i.e. solid particles, [0012] "does not fully dissolve", i.e. something remains as solid, [0014] "includes solids").

2.2 The Board does not share this view, for the following reasons:

2.2.1 The general principles applicable in the construction of the claims are established in the case law of the Boards of Appeal (8th edition, 2016, II.A.6.1, 6.3.1, 6.3.4, 6.3.6), in particular as regards the question whether the claim should be construed taking into account e.g. the description (pursuant to Article 69 EPC) in order to establish whether conditions governing *inter alia* patentability are met.

2.2.2 In the present case, the feature "*in particulate form*" is considered to be broad but clear, as it encompasses

any particulate form thereof, but it is not restricted to a solid form. This construction is not contradicted by any of the further claims (e.g. claim 2, mentioning a partially solvated form), nor by the description.

2.2.3 According to paragraph [0012], the feature "*cationic polymer in particulate form*" is to be given the meaning that "the cationic polymer is insoluble in the non-aqueous liquid composition or does not fully dissolve in the non-aqueous liquid composition". Hence, the cationic polymer may be in any insoluble form, or even partly dissolved form, but not necessarily in insoluble "solid" form.

2.2.4 This construction of claim 1 is also fully confirmed by paragraph [0014], according to which "suitable particulate forms include solids that are completely free of water and/or other solvent, but also includes solids that are partially hydrated and/or solvated". The other paragraphs ([0006] and [0007]) invoked by the respondent, which mention "suspension" or "dispersion", do not change this construction, in so far as any separated phase, not only solid, may be dispersed or suspended in another phase.

2.3 Therefore the skilled person does not gather from claim 1, read alone or in combination with other claims or with the description, that the feature "*particulate form*" means in solid form, but merely that a solid form is thereby included.

3. *Main request - Novelty*

3.1 The respondent stressed that D1 does not directly and unambiguously disclose a non-aqueous liquid composition in which the cationic polymer is "*in particulate form*",

not even if one comes to acknowledge that a coacervate is present therein.

- 3.2 The Board does not share this view, as D1 (claim 1) concerns an article comprising a compartment, a composition, and a water-soluble film, wherein the composition comprises a coacervate and a fabric care active, wherein the coacervate comprises from 0.1% to 10% by weight of the composition, and wherein the weight percentage does not include water that may or may not be associated with the coacervate; wherein the coacervate is comprised of a cationic polymer chosen from a cationic guar gum, a cationic cellulose polymer, or a combination thereof; wherein the fabric care active comprising a silicone; wherein the silicone comprises from 2% to 90% by weight of the composition; wherein the silicone comprises a viscosity from 50 cSt to 600,000 cSt; and wherein the water soluble film encapsulates the composition to form the compartment.

According to claim 7, the composition further comprises a solvent in an amount of from 30 to 70% by weight of the composition, which solvent comprises at least a polyethylene glycol ("PEG"), glycerin, or a combination thereof, and wherein the water-soluble film comprises a polyvinyl alcohol.

- 3.2.1 As regards the required "coacervate", D1 discloses (pages 12 to 14) that it can comprise a cationic polymer and an anionic surfactant and that it involves the formation of a coacervate phase; the term "coacervate phase" should be given the broadest meaning of any form of known separated polymer phase, which

separated phase is not soluble and can be identified, also in form of particulate "globs"; once formed, a coacervate is identifiable as an additional dispersed phase in a composition, for instance by the Anionic Red Dye Coacervate Identification Test, which phase - when present - appears as amorphous or stringy globs already by evaluation under the microscope.

- 3.2.2 The patent proprietor repeated Examples XXIV and XXV of D1 (see D10) to show the absence of any coacervate in particulate form in the compositions therefrom. However, apart from the fact that Example XXIII is now relied upon against novelty, which discloses the formation of a coacervate phase, D10 is contested because it lacks the definition of the method used in order to establish whether these globs are present. The conclusion in D10 appears to be the result of a mere visual assessment. It follows from the foregoing that D10 is not relevant.
- 3.2.3 Summing up, D1 generally discloses the presence, in its article, of a coacervate phase formed by association of a cationic polymer with an anionic surfactant, which coacervate is identifiable as a separated phase, in particular in form of globs, hence in particulate form.
- 3.3 Moreover, D1 discloses specific embodiments comprising such a separated coacervate phase in combination with all other features of claim 1 at issue.

In particular, example XXIII concerns a unit dose article enclosed in a PVOH pouch, the liquid compartment of which comprises a composition containing *inter alia*:

- a cationic guar gum (i.e. a cationic polymer),

- C25AE1.8S (i.e. sodium alkyl (C₂-C₁₅) ether sulfate with an average of 1.8 mole EO, i.e. an anionic surfactant which can associate with the cationic polymer - see D1, page 24),
- glycerine and PEG 400 (as solvents, plasticizers, non-aqueous dispersant), and
- 12.67% of water.

3.3.1 D1 also specifically discloses the preparation procedure of the composition according to its Example XXIII, i.e. the combination of all of the relevant process steps, on page 62 (sixth last line). In particular, in view of the mention therein of "this is the coacervate", D1 thus unambiguously discloses the formation of a coacervate phase, which pre-formed coacervate phase is thus still present in the final composition as a separated phase.

3.3.2 The respondent has contended that the composition comprising the coacervate obtained after steps 1 and 2 of the procedure on page 62 is not yet a composition according to claim 1 as granted. However, it is apparent from D1 that the invoked procedure includes further necessary steps, all of which inevitably lead to the composition of Example XXIII, comprising all the components as listed, i.e. as also defined in claim 1 at issue.

Again, in this respect, the evidence on file (D10) concerns the reworking of Examples XXIV and XXV of D1, not of Example XXIII thereof. The argument that according to D10 it is not apparent that particles of coacervate are present in the compositions as such, but that they are formed only upon dilution with water, is no longer applicable to Example XXIII, which clearly discloses the pre-formation and the incorporation of

the coacervate phase into the final composition, thus which is more relevant than Examples XXIV and XXV of D1 in respect of novelty.

3.3.3 Summing up, the Board finds that the composition of the liquid side of the pouch illustrated in Example XXIII, in view of the broad meaning of the feature "*cationic polymer in particulate form*" (meaning cationic polymer in any particulate form), is novelty destroying for the subject-matter of claim 1 as granted (Article 54(1)(2) EPC). The main request is therefore not allowable.

4. *Auxiliary request 12 - Admissibility*

4.1 The appellant contested the admissibility of this request arguing that it was late-filed, not *prima facie* clearly allowable and in any case not relevant.

4.2 The Board does not share this view since this request has been filed in reaction to the statement setting out the grounds of appeal, in which the appellant *inter alia* contested the narrow interpretation of the feature "*in particulate form*" by the patent proprietor (i.e. in solid form). So the late filing of auxiliary request 12 is justified by the objections raised. Moreover, the decision under appeal rejected the opposition, so the patent proprietor had no reason to file this claim request earlier before the opposition division. As apparent from the following, this claim request is also suitable to overcome the raised objections, and therefore there is no reason for not admitting it into the appeal proceedings (Article 12(4) RPBA).

5. *Auxiliary request 12 - Amendments*

5.1 Compared to claim 1 as granted, claim 1 according to this request requires that the cationic polymer should be in a particular physical state, namely such that *"the particulate form is (i) a solid that is completely free of water and/or other solvent or (ii) a solid that is partially hydrated and/ or solvated."*

5.2 The appellant raised objections under Articles 84 and 123(2) EPC against this amendment as follows:

- the feature *"partially hydrated or solvated"* was disclosed on page 4 (lines 12-13) of the application as filed but only in combination (see page 4, lines 15-17) with a general (0.5 to 50%) or preferred (1 to 20%) amount of water or solvent. The omission of these amount ranges resulted in a non-allowable intermediate generalisation, which contravened the requirements of Article 123(2) EPC;

- the feature *"partially hydrated and/or solvated"* was not clear (Article 84 EPC) as regards the end value of the mentioned partial hydration or solvation thereof; and, in any case,

- even if the end values of the amount ranges disclosed originally were included in claim 1, this would still be unclear (Article 84 EPC), in so far as it is not disclosed in the original application whether a mass, mol or volume % of water or solvent was meant.

5.3 The Board does not share these objections for the following reasons:

5.3.1 A basis for inserting the feature specifying that the cationic polymer in particulate form is partially hydrated or solvated, without any reference to any amount of water or solvent, is found in claim 2 as originally filed. The fact that claim 1 at issue additionally specifies that the particulate form is a solid does not change this conclusion, insofar as the original application expressly discloses (page 4, line 13) that the feature "*in particulate form*" includes solids in partially hydrated or solvated form, without specifying any amount of water or solvent.

This conclusion is confirmed by the original disclosure on page 4, line 15, according to which "Such hydrated or solvated particles **generally** comprise from 0.5% to 50% ...". For the Board, the term "generally" is a preferred indication which does not require the presence of the specified amounts.

5.3.2 For the Board claim 1 is fairly based on original claims 1, 2 and 14, with further specification of the features based on the original general disclosure at page 4, line 13 for the term "solid"; page 3, lines 10-12, for the amount of water; page 10, lines 12-13, for the list of dispersants. Hence, claim 1 complies with Article 123(2) EPC.

5.3.3 As regards the alleged lack of clarity, it is apparent from the features of claim 2 as granted that the feature "*partially hydrated or solvated*" was already present in the claims as granted, i.e. does not arise out of amendments. It follows from G 3/14 (order), that this feature cannot be attacked under Article 84 EPC for lack of clarity in appeal proceedings.

6. *Auxiliary request 12 - Inventive step*

6.1 The present invention relates (paragraphs [0001] and [0003] of the patent in suit) to a stable, easy to pour, non-aqueous liquid composition that delivers good fabric care benefit; a process for stably suspending cationic polymers in non-aqueous liquid compositions, without increasing the viscosity to unacceptable levels, and means for stably incorporating cationic polymers into liquid-comprising unit dose articles, without affecting the solubility of the enclosing film.

6.2 *The closest prior art*

6.2.1 While at the oral proceedings the appellant invoked D1 as the closest prior art, it also invoked D4 in writing, in particular its examples VI, IX, X and XI.

6.2.2 D1 (page 1, lines 1-2) concerns a fabric care composition encapsulated by a water-soluble film, and so belongs to the same technical field as the patent in suit. At page 2, first paragraph, D1 addresses the problem of providing improved softening-through-the-wash compositions that provide effective deposition of a fabric softening active on the treated fabrics to provide the consumer a noticeable softening benefit, while avoiding the deposition of a visible residue on the treated fabrics. It also mentions at page 38, lines 5-11, the need to prevent rigidity of the water-soluble film as well as to ensure stability of the water-soluble film during shipping, handling and storage. These problems are in particular solved by use of a cationic polymer which is suitable to form a coacervate phase (a separated phase) in association with an anionic surfactant for better deposition of the fabric

care ingredient. D1 also discloses the alternative use of a cationic cellulosic polymer.

- 6.2.3 D4 (paragraph [0001]) too relates to unit dose products which deliver liquid fabric treatment compositions. It also addresses the problems of overcoming the incompatibility between anionic surfactants and cationic fabric softening actives (see paragraph [0007]) as well as the interaction between cationic softeners and negatively charged surface of PVOH films (see paragraph [0008]). These problems are solved by using a cationic fabric softening agent with a low cationic charge density or by using a high molar ratio of anionic surfactants to cationic softener.
- 6.2.4 Considering the similarities with the patent in suit in terms of objectives, both documents are suitable starting points, with the closest embodiments thereof being the pouched compositions of Example XXIII of D1 and of Examples VI, IX, X and XI of D4, all being non-aqueous liquid compositions comprising a cationic polymer (of guar gum - D4 and D1- or cellulose - D1) and less than 20% by weight of water, in combination with either glycerin and PEG 400 (D1), propandiol (Example VI of D4) or trihydroxystearin (Examples IX to XI of D4).
- 6.2.5 It follows that the composition of Claim 1 at issue is **distinguished from D1** in that the cationic polymer is a dispersed solid phase, and from D4 in the choice of the non-aqueous dispersant and in the solid state of the cationic polymer, so that example XXIII of D1 is structurally closer than D4 to the patent in suit, and so represents the closest state of the art for assessing obviousness according to Article 56 EPC following the problem-solution approach.

6.3 *The technical problem*

- 6.3.1 The respondent argued that the experimental evidence provided with its letters of 19 July 2012 (Attachments I to III) and 8 January 2013 (Attachment IV) shows that the technical problem (as stated in paragraph [0003] of the patent in suit) of providing "improved water-soluble unit dose articles comprising cationic polymers in which the cationic polymers are stably dispersed and the polymers do not adversely affect the solubility of the enclosed film" has been effectively solved by the claimed subject-matter.
- 6.3.2 The Board notes that the comparative tests in Attachments I to IV all concern a single cationic polymer in dissolved or particulate form, namely cationically modified hydroxyethylcellulose (CatHEC), and so only a particular cationic polymer falling under claim 1 at issue. Moreover, none of these comparative tests concerns a composition according to Example XXIII of D1, which can contain a cellulose cationic polymer.
- 6.3.3 Although it appears that the maintenance of the film strength and its dissolution properties are shown by these comparative examples for the specific particulate cationic polymer (CatHEC) tested, the invoked tests do not address the coacervate of the cationic polymers used in D1.
- 6.3.4 Hence, with respect to D1 the problem can be seen in the prevention of the increase of the viscosity of the composition to unacceptable levels at low water concentrations (see patent in suit, paragraph [0003]), which is prevented by dispersing the cationic polymer in solid form, and by avoiding that it completely dissolves.

6.3.5 At least because claim 1 at issue requires a cationic polymer in solid particulate form, the Board is of the opinion that the technical problem effectively solved over D1 is the provision of further stable, non-aqueous, liquid compositions enclosed in polymer film for fabric treatment, the viscosity of which is not increased at unacceptable levels by the presence of the cationic polymer.

6.4 The *success* of the claimed solution to this less ambitious problem is not in dispute.

6.5 *Obviousness*

6.5.1 The question which arises is whether the skilled person starting from the closest embodiment of D1 would have found any motivation within the teaching of this prior art document, or elsewhere in the cited prior art, in order to arrive at a composition as claimed.

6.5.2 From the disclosure of D1, which concentrates on the formation of a coacervate between cationic polymer and anionic surfactants, the skilled person does not gather that a stable dispersion of the cationic polymer in solid form as presently defined is advantageous in respect of the maintenance of the film properties and the control of the viscosity of the low-water-containing composition. Thus, the claimed composition is not obvious over D1. This conclusion also applies to the process defined in claim 13.

6.5.3 From the disclosure of D4 the skilled person does not gather that the combination of a different dispersant (from that used in the invoked examples, i.e. glycerol) and of a stable dispersion of a cationic polymer in solid form would be advantageous in relation to the

maintenance of the film properties and in respect of a better control of the viscosity of low-water-containing compositions.

The particular cationic guar gum used in the invoked examples of D4 is N-Hance 3196 ex Hercules. From the relevant product data sheet (D6) it can be gathered that it is a viscosifier, and that it can be incorporated in the water phase if it is crosslinked with boron, whereby during the preparation of the solution, upon lowering the pH, it becomes hydrated.

- 6.5.4 It is however not apparent to the Board how, in the light of D1 or D4, the skilled person might have obviously arrived at the composition according to claim 1 at issue.
- 6.5.5 Other prior art documents having not been invoked, it follows from the above considerations that the composition defined in claim 1 and the process for making it defined in claim 13 are not obvious in view of the prior art, and so involve an inventive step under Article 56 EPC.
7. Auxiliary request 12 thus complies with the EPC and is therefore allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form on the basis of the claims according to auxiliary request 12 filed with the reply to the statement of grounds of appeal dated 9 January 2017, and a description to be adapted where appropriate.

The Registrar:

The Chairman:



D. Magliano

J.-M. Schwaller

Decision electronically authenticated