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**Datasheet for the decision  
of 30 October 2023**

**Case Number:** T 0681/21 - 3.3.06

**Application Number:** 15790968.0

**Publication Number:** 3221438

**IPC:** C11D3/00, C11D3/22, C11D3/37

**Language of the proceedings:** EN

**Title of invention:**  
Fabric treatment composition

**Patent Proprietors:**  
Unilever IP Holdings B.V.  
Unilever Global IP Limited

**Opponents:**  
Henkel AG & Co. KGaA  
The Procter & Gamble Company

**Headword:**  
Fabric treatment composition/UNILEVER

**Relevant legal provisions:**  
EPC Art. 56  
RPBA 2020 Art. 12(4), 13(1)

**Keyword:**

Experimental data submitted with the statement of the grounds of appeal and the reply thereto to be considered - (yes)  
New argument submitted during oral proceedings to be disregarded - (yes)  
Inventive step (all requests) - (no) - alleged synergistic effect to be disregarded in view of G 2/21 - diverging experimental data - benefit of the doubt not to be granted to the patent proprietors

**Decisions cited:**

G 0002/21, T 0570/08, T 1182/15

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 0681/21 - 3.3.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.06**  
**of 30 October 2023**

**Appellant:** The Procter & Gamble Company  
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**Respondents:** Unilever IP Holdings B.V.  
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**Representative:** Henkel AG & Co. KGaA  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 7 April 2021  
rejecting the opposition filed against European**

patent No. 3221438 pursuant to Article 101(2)  
EPC.

**Composition of the Board:**

<b>Chairman</b>	J.-M. Schwaller
<b>Members:</b>	L. Li Voti
	O. Loizou

## Summary of Facts and Submissions

I. The appeal of opponent 2 is against the decision of the opposition division to reject the oppositions against European patent no. 3221438, claim 1 thereof reading:

*"1. A fabric treatment composition comprising:  
a) from 60 to 99 wt.% of polyethylene glycol;  
b) from 0.1 to 5 wt.% of cationic polymer; and,  
c) from 0.1 to 10 wt.% of silicone;  
wherein the cationic polymer is a cationic polysaccharide polymer."*

II. In its grounds of appeal the appellant argued that the claimed subject-matter lacked an inventive step over **D1** (DE 10 2006 034 051 A1) taken alone or in combination with **D2** (WO 2014/079621); further it filed **D16** (3rd Technical Report by C. Barrera dated 17 August 2021).

III. In their reply, the patent proprietors and respondents, referring inter alia to **D7** (Experimental report 1 of 6 September 2016) and **D8** (Technical Report by K. Burgess dated 24 February 2020), defended the patent as granted and filed auxiliary requests 1 to 6 and **D17** (Technical Report by K. Burgess dated 21 December 2021).

IV. With a further letter dated 8 August 2022 the appellant filed **D18** (4th Technical Report by C. Barrera).

V. Opponent 1 and party as of right did not file any submission or request.

VI. In response to the board's preliminary opinion the respondents filed documents **D19** (PhabrOmeter<sup>®</sup> Sensory Data Evaluation by Nu Cybertek Inc., 2021) and **D20**

(Secant Modulus of Elasticity/Instron) with a letter dated 23 October 2023.

VII. At the oral proceedings held on 30 October 2023 the final requests of the parties were the following:

The appellant requested that the decision under appeal be set aside and the patent be revoked. Further it requested that D16 and D18 be admitted into the appeal proceedings but not auxiliary request 6 and documents D19 and D20.

The respondents requested that the appeal be dismissed (main request), or in the alternative, that the patent be maintained in amended form on the basis of the claims according to one of auxiliary requests 1 to 6, all filed with the grounds of appeal. Further they requested that the new data D17 and documents D19 and D20 be admitted into the appeal proceedings but not the experiment under heading "*5. Comparison of expected additive softness versus measured softness for different silicones*" in D16 nor experimental report D18.

## **Reasons for the Decision**

Main request - Inventive step

1. The invention relates to a fabric treatment composition including a silicone that displays improved softening. According to paragraph [0005] an object of the invention is to improve the softening performance of a silicone during the laundry process. Paragraph [0006] states in this respect that if the silicone is provided as part of a separate composition instead of adding it

as part of the laundry detergent, the softening performance is improved.

- 1.1 There was unanimity among the parties that D1, example E4, represented the closest prior art, as said example discloses (paragraphs [0125]-[0126]) a fabric treatment composition which is not part of a laundry detergent, and comprising 80 wt% of polyethylene glycol and 7 wt% of polydimethylsiloxane (**PDMS**), with said composition thus differing from the subject-matter of claim 1 as granted in that it does not contain 0.1 to 5 wt% of a cationic polysaccharide polymer (in the following **CPP**).
- 1.2 The board notes that since D1 already provides a fabric treatment composition comprising silicone, with said composition being not part of the laundry detergent used, the technical problem identified in the patent in suit is thus already solved.
  - 1.2.1 The respondents argued that the distinguishing feature of claim 1 at issue would provide an unexpected advantage in terms of improved softness and in particular a synergy due to the combination of the silicone with a CPP.
  - 1.2.2 The board notes that this formulation of the technical effect differs from that identified in the patent, and thus it is important to verify whether such a formulation is in accordance with the conclusion of the Enlarged Board of Appeal in **G 0002/21** (reasons 94) that *"A patent applicant or proprietor may rely upon a technical effect for inventive step if the skilled person, having the common general knowledge in mind, and based on the application as originally filed, would consider said effect as being encompassed by the*

*technical teaching and embodied by the same originally disclosed invention".*

- 1.2.3 In the present case it is not in dispute that the application as filed does not relate to a synergistic effect arising from the combination of a silicone with CPP or any other component. Also the fact that the application as filed (page 2, lines 7-8) indicates the CPP to be a preferred cationic polymer without explaining the reason for this preference cannot foreshadow that the claimed combination would provide any type of synergism. The respondents did also not file any evidence that it was common general knowledge that silicone and cationic polymers may provide a synergism in terms of improved softness.

Therefore, it follows from the above reasons that the alleged synergistic effect would not have been considered by the skilled person as being encompassed by the technical teaching of the application as filed and has to be disregarded.

- 1.2.4 The board further notes that the only data available from the respondents and comparing the alleged invention with a composition at least in part similar to the closest prior art, and thus comprising a PDMS non-ionic silicone, are those in D8 concerning the sensory hand evaluation of washed terry towelling. These data however only show that a composition 1 (according to claim 1 at issue) comprising 1.67 wt% PDMS and 0.67 wt% CPP is found softer than a composition A comprising 1.67 wt% of the silicone and no CPP, which result is for the skilled person already to be expected because of the greater amount of softeners contained in composition 1. Therefore, these data are not apt to show any possible improvement due



to the choice of CPP as an additional softener and, in the absence of any other comparison against the closest prior art, it can only be concluded that improved softening has not been convincingly proven across the entire scope of claim 1.

1.2.5 It follows that the objective technical problem underlying the invention and solved by the composition of claim 1 at issue has thus to be formulated in less ambitious terms, namely as the provision of a further fabric treatment composition comprising silicone.

1.3 As to the question whether the proposed solution was obvious or not, the board notes that D1 (paragraph [0037] and claim 4) teaches that the disclosed fabric treatment compositions should comprise softening agents selected from polysiloxane, clay, cationic polymers or mixtures thereof, and it lists as suitable cationic polymers (paragraph [0047]) also polyquaternium-4, -10 and -24, all being cationic hydroxyethylcellulose (polysaccharide) polymers, i.e. CPPs. Moreover, the description (paragraph [0051]) teaches to use 0.1 to 10 wt% of such softening agents.

In the board's view, it was thus obvious for the skilled person faced with the technical problem posed to try as an alternative to the composition of example E4, one comprising any combination of the softening agents suggested by the description such as one comprising the silicone of example E4 with any cationic polymer disclosed in the description, for example a CPP.

In this respect the board cannot follow the respondents' argument that the skilled person would rather consider the only cationic polymer disclosed in

the examples of D1 (see example E5), which is not a CPP, and would disregard the CPPs disclosed in the description within the list of alternative cationic polymers, because D1 does not contain any teaching that would have led the skilled person away from trying any of the cationic polymers disclosed.

It was thus obvious for the skilled person to add a small amount, for example 1 or 2 wt% of a CPP, to the composition of example E4, and thus arrive in an obvious manner at a composition having all the features of claim 1 at issue.

- 1.4 The board thus concludes that the subject-matter of claim 1 according to the main request lacks an inventive step within the meaning of Article 56 EPC.
  
2. Auxiliary request 1 - inventive step
  - 2.1 Claim 1 of this request differs from that as granted in that the silicone is selected from a list of compounds including PDMS. Since the silicone used in the closest prior art D1/E4 discussed above is PDMS, this claim lacks an inventive step for the same reasons exposed above.
  
3. Auxiliary request 2 - inventive step
  - 3.1 Claim 1 of this request differs from that of auxiliary request 1 in that the list of silicones does not include PDMS. The claimed list of silicones however still includes aminosilicones.
  
  - 3.2 D8, as already mentioned above, contains also sensory experimental data (example 2 and B) regarding a composition comprising aminosilicones and PDMS. However, the provided comparisons only show that a

composition 2 (according to claim 1 at issue) comprising 1.67 wt% aminosilicones and 0.67 wt% CPP is softer than a composition B comprising 1.67 wt% of the silicone and no CPP, which result was - in the board's opinion - to be expected because of the greater total amount of softeners used and cannot be considered to be due to the choice of CPP as additional softener. Moreover, in the absence of any further comparison against the closest prior art comprising a non-ionic silicone, it cannot be concluded that the claimed subject-matter provides improved softening over the closest prior art across the entire scope of claim 1. Therefore, the objective technical problem underlying the claimed invention remains the same as exposed above with respect to the main request.

- 3.3 Since D1 (paragraphs [0039], [0042] and [0043]) discloses aminosilicones as suitable alternative silicone softeners for PDMS, in view of the technical problem posed, in the board's opinion it was obvious for the skilled person to try as an alternative to the composition of D1/example E4 one comprising similar amounts of one of the other silicones equally suggested in the description of D1, for example an aminosilicone and, as exposed above, to use it in combination with a small amount, for example 1 or 2 wt%, of a CPP, also suggested as softener in D1.
- 3.4 Claim 1 of this request thus also lacks an inventive step.
- 4. Auxiliary requests 3 and 5 - inventive step
  - 4.1 Each claim 1 of these requests encompasses an embodiment which differs from that of claim 1 as

granted only in that the CPP is a cationic cellulose polymer.

- 4.2 For the same reasons exposed with respect to the main request the objective technical problem remains the provision of a further fabric treatment composition comprising silicone.

Moreover, the CPPs disclosed in D1 (paragraph [0047]) and already discussed with respect to the main request are cationic cellulose polymers.

- 4.3 Since the new feature of claim 1 at issue was already disclosed in D1, this claim lacks inventive step for the same reasons exposed above.

5. Auxiliary request 4 - inventive step

- 5.1 Claim 1 of this request differs from claim 1 as granted in that the silicone is an anionic silicone.

- 5.2 As regards this request the respondents relied on the experimental data D7, filed after publication of the application as filed, and submitted that a combination of anionic silicone with CPP provided unexpectedly better softening than a similar combination comprising a cationic polymer which was not a CPP.

- 5.2.1 In the board's view, a skilled person reading the application as originally filed and having the common general knowledge in mind would derive therefrom as a technical teaching that the addressed improved silicone softness is especially obtained by using a combination with the components indicated as preferred, such as a CPP and an anionic silicone (page 2, lines 7-8 and 16). Therefore, said alleged technical effect can be considered to be encompassed by the technical teaching

and embodied by the same originally disclosed invention and may thus be considered in view of **G 2/21**.

- 5.3 D7 compares in its experiment 1 the softening effect of a composition D1 comprising 1wt% cationic cellulose polymer Ucare LR400 (polyquaternium-10 of D1) as CPP and 2wt% of a carboxy functional anionic silicone with a composition B1 or C1 comprising only one of the two components in the same amount used for composition D1. The sensory protocol and the softness measurements confirm that the composition D1 provides better softening than B1 or C1. However, this superiority is not surprising since composition D1 contains a greater total amount of softeners, so that an improved softening was to be expected. This comparison is thus unsuitable for proving the alleged unexpected technical effect.

Experiment 2 of D7 compares a composition B2 comprising 1wt% of the cationic cellulose polymer and 2wt% of the anionic silicone with a composition C2 comprising the cationic polymer Merquat 550, which is not a CPP and is cited in D1 (paragraph [0047]) as a suitable cationic non-polysaccharide polymeric softener (polyquaternium-7). These compositions were subjected to sensory hand evaluation and the composition B2 according to claim 1 at issue resulted to be softer.

- 5.4 The appellant, relying especially on the data contained in part 4 of D16 filed with its statement of the grounds of appeal, contested the validity of the alleged technical effect at least across the entire scope of claim 1 at issue. As explained by the appellant in its grounds of appeal, D16 was filed in reaction to the decision of the opposition division to accept D7 as showing convincingly the presence of an effect across the entire scope of claim 1 and to

disregard the opponent's experiments filed during opposition.

Since this view was taken by the opposition division for the first time at the oral proceedings, the opponent could only file in appeal further experiments taking into account the reasons of the decision. This was also not disputed by the respondents, which objected only against the admissibility of part 5 of D16.

Therefore, as expressed in the board's preliminary opinion, part 4 of D16 has to be considered under Article 12(4) RPBA 2020.

- 5.4.1 The appellant's data D16 (part 4) were carried out with the same amount of product and under similar washing conditions as the respondents' tests in D7, but the softness of the washed fabric samples was measured by means of an Instron instrument, which (as illustrated in D20) measures the secant modulus and thus the elasticity of the washed textile.
- 5.4.2 The data in D16 (part 4) show that a composition E comprising a cationic cellulose polymer Celquat L200 (polyquaternium-4 in D1: paragraph [0047]), thus a CPP different from that tested in D7, in combination with an anionic silicone does not provide a statistically different softness from that measured with composition F comprising instead the cationic polymer Merquat 295 (polyquaternium-22), a cationic polymer as disclosed in D1 which is not a CPP. Since the indicated standard deviation for the used tests is acceptably narrow there is no reason to dispute the obtained numerical results. Therefore, this combination of CPP and anionic silicone does not provide the alleged softness benefit invoked by the respondents, so that D16 apparently casts doubts

to the fact that the alleged benefit shown in D7 can be obtained across the entire scope of claim 1 at issue.

5.5 The respondents contested the validity of the data in D16 for various reasons:

5.5.1 They submitted during oral proceedings that the test carried out in D16 by means of an Instron machine would not be suitable for determining softness. In fact D20, illustrating the determination of the secant modulus by an Instron machine would not mention its application for evaluating fabric softness. However, the board notes that the respondents never raised this argument during opposition (wherein similar measurements had been carried out by the opponent in the experimental data submitted at that time) or during appeal proceedings in writing. In fact, they just commented in their reply to the grounds of appeal (page 4, lines 7-12) that a machine such as an Instron only measured one aspect of the overall softening effect (thus also providing information about softness). Furthermore, in the letter of 23 October 2023 they only filed D19 and D20 in order to reiterate the difference in the way the tests were carried out by the respondents and the appellant, but not for disputing the suitability of the Instron machine for evaluating softness. The appellant confirmed instead during oral proceedings that the Instron machine was suitable.

It follows from the above considerations that this respondents' new argument could and should have been brought, if not at first instance, at least in the reply to the grounds of appeal with which D16 was filed. Moreover, the respondents' new submission has not been prompted by a new argument filed by the appellant or submitted by the board in its provisional

opinion, which could possibly justify its submission during oral proceedings.

Therefore, the above respondents' submission has to be disregarded under Articles 13(1) and 12(4) RPBA.

5.5.2 The respondents also submitted that the method used by the appellant in D16 only measured one aspect of the overall softening effect whilst the sensory hand evaluation of D7 provided a more holistic and valid assessment of softness. However, the board remarks that also the respondents evaluated softness in the other tests of D7 (Table 3) by means of an instrument, a PhabrOmeter (illustrated in D19 as suitable for evaluating inter alia fabric softness), and in particular (see Softness measurement on page 2) by measuring the force necessary for pushing the washed textile sample through hold rings, which method gave according to the respondents similar qualitative results as the sensory evaluation. Since the patent in suit does not contain any teaching about the method to be used for evaluating softness, in the absence of evidence to the contrary the method used by the appellant cannot be considered unsuitable for evaluating softness and thus, it cannot be concluded that it does not give at least qualitative results similar to those of a sensory hand evaluation. Consequently, the appellant's method cannot be considered to be less significant than those of the respondents.

5.5.3 The respondents also objected that the tests in D16 were unreliable since in parts 3 and 5 similar compositions were tested and provided diverging results. The board however notes that the compositions tested in parts 3 and 5 are not identical since they



comprise slightly different amounts of cationic polymer and silicone and thus the described data represent different series of experiments. Moreover, the only results providing clearly diverging softness results are those comprising an anionic silicone without cationic polymer (B of Table 3 and I of Table 5), the other results providing at least tendentially similar increased softness results. Therefore, the respondents' objection is of no relevance with respect to the tests contained in part 4 of D16, which were carried out on compositions different from those of parts 3 and 5 and comprising both an anionic silicone and a cationic polymer.

5.5.4 The respondents considered the tests carried out by the appellant not to be significant also because they used during the wash a mixed ballast containing mostly terry towel but measured softness on polycotton fabric, i.e. an already soft fabric on which it was more challenging to show improved softening. However, the board notes that the tests carried out in D16 (part 3) clearly did show improved softness measured on polycotton fabric treated with a composition without any softening compound. Moreover D17, cited by the respondents in reply to the filing of D16 and thus also to be considered under Article 12(4) RPBA, even though showing a more pronounced measured softening effect on knitted cotton, reports measured increased softness also on knitted polycotton. Therefore, contrary to the respondents' submission, increased softness is well measurable on polycotton and the D16 data cannot be disregarded simply because they are carried out on a different type of fabric than D7.

5.5.5 The respondents argued additionally during oral proceedings that the tests in D16 were carried out in

presence of a great amount of terry towel ballast during the wash, which would mask any possible softening improvement on polycotton since the softening compounds would tend to be absorbed preferably by the ballast and not by the minority of polycotton samples. However, also this argument is in the board's view not convincing since the tests in D16 (part 3), as explained above, clearly show under same conditions improved measured softness on polycotton with respect to the use of a composition without softener.

- 5.5.6 In view of the diverging results in D7 and D16 the respondents also invoked the benefit of the doubt in their favour. However, the board notes that it is established case law (see for example **T 0570/08**, reasons 1.1.4 and **T 1182/15**, reasons 4.2.4) that the benefit of the doubt cannot be granted if the other party provides experimental data convincingly casting doubts on the effect allegedly achieved as it is also in the present case.

It follows from the above considerations that it cannot be established that the claimed combination provides the alleged improved softness at least across the entire scope of claim 1.

- 5.6 The objective technical problem solved has thus to be again formulated as the provision of a further fabric treatment composition comprising silicone.
- 5.7 Even though D1 does not disclose explicitly anionic silicones as softeners, it also does not exclude that other known types of silicones suitable for textile softening might be used. In this respect the skilled person would derive for instance from D2 (page 1, lines 16-17 in combination with the passage from page 1, line

29 to page 2, line 4 and page 2, lines 21-25) that anionic silicones are suitable as softeners in laundry detergents as an alternative to PDMS or aminosilicones and especially in combination with CPPs.

- 5.7.1 The board also cannot agree with the respondents' argument that the skilled person would disregard D2 since it relates mainly to liquid laundry detergent compositions and not to a solid fabric conditioner containing a great amount of polyethylene glycol and to be used separately from the laundry detergent as in D1. In fact, D2 (page 2, lines 18-19) teaches explicitly that the disclosed laundry detergents may be provided also as a powder or granules and it concerns the same technical field of application as D1, namely laundry washing. Moreover, even though the compositions disclosed in D1 are differently formulated and used separately from the laundry detergent, the skilled person would derive from the technical teaching of D2 that anionic silicones are equally suitable as textile softeners as PDMS, which is used in example 4 of D1, and may be used in combination with CPPs.
- 5.7.2 The further respondents' objection that the skilled person would not try to use an anionic silicone in D1 since it would expect that in a solid composition it would interact with other components is not supported by any evidence. To the contrary D2, even if dealing mainly with liquid compositions, expressly teaches that the compositions in question, that comprise inter alia anionic silicone in combination with CPP and other detergent components, may also be provided as a solid.
- 5.8 Therefore the board concludes that it was obvious for the skilled person faced with the above technical problem to modify the composition of D1/example 4 by

using the anionic silicone of D2 as a promising alternative for PDMS in combination with CPPs and to add thereto a small amount of CPP as taught in D1.

- 5.9 The board therefore concludes that claim 1 of this request lacks an inventive step.
6. Auxiliary request 6 - inventive step
- 6.1 Claim 1 of this request differs from that of auxiliary request 4 in that the CPP is a cationic cellulose polymer.
- 6.2 Since the CPPs disclosed in D1 and D2 (page 6, lines 29-30) and the CPPs tested in the appellant's data D16 are cationic cellulose polymers, the same arguments exposed with respect to auxiliary request 4 apply *mutatis mutandis* to auxiliary request 6.
- 6.3 Claim 1 of this request thus also lacks an inventive step and does not meet the requirements of Article 56 EPC.
7. In view of the above conclusion there is no need to discuss the admissibility of auxiliary request 6 and of D18 to D20 and of part 5 of D16.
8. The board thus concludes that none of the respondents' requests comply with the requirements of the EPC.

**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:



D. Hampe

J.-M. Schwaller

Decision electronically authenticated