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**Datasheet for the decision
of 6 November 2012**

Case Number: T 1230/10 - 3.3.06
Application Number: 01937313.3
Publication Number: 1280882
IPC: C11D 3/50, C11D 1/92,
C11D 3/43, C11D 17/04
Language of the proceedings: EN

Title of invention:

Highly concentrated fabric softener compositions and articles
containing such compositions

Patentee:

THE PROCTER & GAMBLE COMPANY

Opponents:

Henkel AG & Co. KGaA
UNILEVER PLC / UNILEVER NV

Headword:

Fabric softening article/PROCTER & GABMLE

Relevant legal provisions:

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Relevant legal provisions (EPC 1973):

EPC Art. 56, 84

Keyword:

"Inventive step (main request and auxiliary request 1): no - obvious combination of known technical means"

"Clarity (auxiliary request 2): yes"

"Suitability for a claimed process step not suggested in the available prior art"

"Inventive step (auxiliary requests 2): yes"

Decisions cited:

T 1051/97, T 0570/91

Catchword:

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Case Number: T 1230/10 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 6 November 2012

Appellant: Henkel AG & Co KGaA
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Party as of right: UNILEVER PLC / UNILEVER NV
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted
15 April 2010 concerning maintenance of
European patent No. 1280882 in amended form.**

Composition of the Board:

Chairman: P.-P. Bracke
Members: L. Li Voti
U. Tronser

Summary of Facts and Submissions

- I. The present appeal is from the decision of the Opposition Division to maintain the European patent no. 1 280 882, concerning a fabric softening article, in amended form.
- II. In their notices of opposition the Opponents sought the revocation of the patent on the grounds of Article 100(a) EPC 1973, because of lack of inventive step of the claimed subject-matter.

The following documents were cited *inter alia* during the opposition proceedings:

(5): US-A-4851141 and

(8): GB-A-953496.

- III. The Opposition Division found in its decision that the amended claims according to the then pending main request complied with all the requirements of the EPC.

In particular, as regards inventive step, the Opposition Division found that the subject-matter of claim 1 differed from the disclosure of document (5), representing the closest prior art, only insofar as the fabric softening composition was included in an article comprising a polyvinyl alcohol (PVA) film having a thickness of 20 to 80 μm . Moreover, it would have not been obvious to the skilled person, in the light of the teaching of the cited prior art, to use a PVA film, such as that disclosed in document (8), for providing an alternative readily dispensable form of the fabric softening composition of document (5), able to dissolve

rapidly in a stream of cold water passing through the dispenser device of a washing machine.

IV. An appeal was filed against this decision by Opponent 01 (Appellant).

The Appellant requests that the decision under appeal be set aside and the patent be revoked.

The Respondent (Patent Proprietor) requests that the appeal be dismissed or, in the alternative, that the patent be maintained on the basis of the auxiliary requests 1 or 2, both submitted with the letter dated 21 December 2010.

The independent claim 1 according to the Respondent's **main request** reads as follows:

"1. A fabric softening article comprising a highly concentrated liquid fabric softening composition for dispensing in a washing machine or by handwashing, the composition characterized by comprising:
a fabric softener active or mixture of actives that is at least 40%, preferably at least 50%, more preferably at least 60%, even more preferably at least 75%, by weight of the composition;
0.1 to 15% of a phase stabilizer;
optionally, perfume, profragrance, or mixtures thereof;
optionally, a water-soluble dye;
wherein the composition comprises less than 20%, water, by weight of the composition;
and a polyvinyl alcohol film having a thickness from 20 to 80 microns encapsulating said composition."

Claim 1 according to the Respondent's **first auxiliary request** reads as follows:

"1. A process of dispensing a fabric softening article, comprising a highly concentrated liquid fabric softening composition characterized by comprising: a fabric softener active or mixture of actives that is at least 40%, preferably at least 50%, more preferably at least 60%, even more preferably at least 75%, by weight of the composition; 0.1 to 15% of a phase stabilizer; optionally, perfume, profragrance, or mixtures thereof; optionally, a water-soluble dye; wherein the composition comprises less than 20%, water, by weight of the composition; and a polyvinyl alcohol film having a thickness from 20 to 80 microns encapsulating said composition, the process comprising the steps of placing the article in a dispensing device of a washing machine, and adding an amount of water sufficient to dilute the composition."

Claim 1 according to the Respondent's **second auxiliary request** differs from claim 1 of the first auxiliary request insofar as the wording "dispensing device" in the last but one line of the claim is replaced with "dispensing drawer".

V. The Appellant submitted that

- the objective technical problem underlying the invention, seen in the light of document (5), consisted only in the provision of an alternative article for dispensing easily a liquid softening composition to the rinse liquor of a washing process; moreover, it was

known from document (8) to encapsulate a highly concentrated softening composition with a PVA film, which was readily soluble in the rinse water; therefore, it would have been obvious to the skilled person to encapsulate also the highly concentrated softening compositions of document (5) with a PVA film;

- as regarded the thickness of the used PVA film, which was not disclosed in document (8), this distinguishing feature was not relevant for the invention since no advantage had been proven for the selected range of thicknesses; moreover, the selected thickness was a conventional one for such PVA films;

- furthermore, the subject-matter of claim 1 according to the main request was not restricted to an article suitable only for use in a dispensing drawer of a washing machine but it included articles suitable for use by handwashing; since the compositions known from document (5) were explicitly indicated to be suitable for handwashing, also this embodiment of the invention lacked an inventive step in the light of the combination of documents (5) and (8);

- as regards the process claimed in auxiliary request 1, it was not restricted to the use of the claimed article in a dispensing drawer of a washing machine but included the use of any type of dispensing device, including one which could be used directly into the drum of a washing machine; therefore, also this step would not amount to an inventive step in the light of the combination of documents (5) and (8), the latter document concerning explicitly the use of a softening article directly in the drum of a washing machine;

- finally, as regards the process claimed in auxiliary request 2, it had to be expected that a PVA film, under the repeated stream of cold water passing through the dispensing drawer, would dissolve rapidly to an extent sufficient for enabling the therein contained liquid softener composition to be dispensed to the rinse liquor;

- as regards the reduction of residues in the dispensing drawer, allegedly due to the selection of a particular range of thicknesses for the PVA film, the table contained on page 50 of the patent in suit showed that such an advantage was not obtained throughout the entire range of thicknesses claimed; therefore, this technical advantage which had not been convincingly proven had to be disregarded in the evaluation of inventive step (see T 1051/97); consequently also claim 1 of the second auxiliary request lacked an inventive step in the light of the combination of documents (5) and (8).

The Appellant submitted during oral proceedings also that the wording "adding an amount of water sufficient to dilute the composition" contained in each claim 1 of the auxiliary requests 1 and 2 was not clear since the claims did not specify at which point of the process water had to be added.

VI. The Respondent submitted that the claimed subject-matter involved an inventive step.

In particular, it was not obvious to combine the teaching of document (5), which related mainly to the

use of a liquid softener concentrate in the dispensing drawer of a washing machine, with the teaching of document (8), which concerned the use of different technical means (see T 570/91), in particular, the use of a softening article directly into the drum of a washing machine.

Moreover, the prior art did not suggest the possibility of using a unit dose as claimed in the dispensing drawer of a washing machine or in a dispensing device in general and, in fact, the skilled person would have had no reason, in the light of the teaching of the prior art, to expect that a PVA film would dissolve sufficiently rapidly in a dispensing drawer of a washing machine in order to dispense the liquid softening composition into the rinse liquor.

The tests contained in the patent in suit showed instead that the claimed invention successfully solved the technical problem underlying the invention, which consisted in the provision of a fabric softening article, which was more easy and convenient to handle and was suitable for use in the dispensing drawer of a washing machine.

As regards the disputed wording "adding an amount of water sufficient to dilute the composition", it would have been clear to the skilled person that this process step did not concern the addition of water to the encapsulated article but to the liquid fabric softener dispensed therefrom.

Reasons for the Decision

1. Respondent's main request

1.1 *Inventive step*

1.1.1 The invention of claim 1 concerns an encapsulated highly concentrated liquid fabric softening composition for dispensing in a washing machine or by handwashing.

As explained in the patent in suit (paragraph 2), liquid fabric softening compositions are dispensed directly into the rinse water at the beginning of the rinse cycle or placed in a dispensing device at the beginning of the wash cycle for delayed dispensing. Moreover, it was already known that fabric softening compositions may be delivered in unit dosage forms. However, it had been found that some encapsulates of the prior art, when placed in the dispensing drawer or other dispensing device incorporated in the washing machine, became highly viscous and formed gels as water passed through the dispensing device. In such a case not all the fabric softening active would reach the rinse solution and the fabrics; moreover a gelatinous residue would be left in the dispenser and staining of fabrics could occur.

The technical problem underlying the invention thus is formulated in the patent in suit (paragraph 4) as the provision of a highly concentrated fabric softening composition and an article containing it, which minimizes the formation of residues and the staining of the treated fabrics. Moreover, the incorporation of

such compositions in an article provided additional convenience, less mess, and ease of use.

- 1.1.2 Both parties considered document (5) to represent the closest prior art.

In fact, document (5) relates to the provision of a highly concentrated liquid softener composition which can be easily dispersed in water and shows a reduced formation of residues when it is dispensed (see column 1, lines 9 to 14, 45 to 60 and column 2, lines 9 to 15), i.e. it concerns part of the technical problems addressed to in the patent in suit.

The Board thus takes also document (5) as the most suitable starting point for the evaluation of inventive step.

- 1.1.3 Since it was undisputed that the compositions of document (5) already solved part of the technical problem identified in the patent in suit, the Respondent formulated the technical problem underlying the claimed invention as the provision of an improved article for fabric softening, which article was more easy and convenient to handle and could be dispensed from a dispensing drawer of a washing machine.

However, the Board remarks that the wording of claim 1 of the main request is in no way limited to an article suitable for use in the dispensing drawer of a washing machine and, to the contrary, the claim specifically indicates that the article is alternatively suitable for dispensing by handwashing.

Consequently, the technical problem formulated by the Respondent does not concern the entire claimed subject-matter, which encompasses explicitly articles which may be not suitable for dispensing in a washing machine but are suitable for dispensing by handwashing.

Therefore, the Board finds that the technical problem underlying the invention has to be formulated in a more general way as the provision of another article for fabric softening, based on a highly concentrated softening composition, which is improved insofar as it is more easy and convenient to handle.

The Board has no doubt that this technical problem has been solved by an article having all the technical features of claim 1.

- 1.1.4 It is not disputed that the subject-matter of document (5), in particular the composition of example 4, differs from that of claim 1 according to the main request only insofar as the softening composition is not encapsulated in a PVA film having the thickness of 20 to 80 μm .

The Board remarks that the softening compositions disclosed in document (5) are explicitly indicated to be also suitable for use by handwashing (see column 6, lines 43 to 48). Moreover, it was already known from document (8) to use a unit dose of a highly concentrated softening composition by encapsulating it with a readily water-soluble film, such as PVA, in order to obtain a softening article in a form which is more convenient for household use and handling (see

document (8), page 1, lines 18 to 23; page 3, lines 48 to 62).

Since the readily water-soluble article of document (8) was suitable for use in the drum of a washing machine, as shown in example III, i.e. in the presence of the considerable amount of water found in the last rinse of a washing process, it would have been considered by the skilled person to be also suitable for use by handwashing, wherein also a considerable amount of water is present. In fact since the water used in the last step of the rinse of document (8) is undoubtedly unheated tap water which is flushed into the drum, as submitted by the Appellant, the skilled person would have expected the article to dissolve also under handwashing conditions to an extent which is sufficient for dispensing the liquid softening composition.

As regards the range of thickness of the PVA film according to claim 1, which is not disclosed in document (8), it would have been obvious for the skilled person to chose a PVA film available on the market at the priority date of the patent in suit. In this respect, it cannot be disputed that films having the required thickness were commercially available, as shown in the patent in suit itself (paragraph 281 and examples in paragraphs 285, 288 and 290).

Moreover, there is no indication in the patent in suit that the selected thickness would provide any unexpected technical effect by handwashing, i.e. in a process wherein the article can be left immersed in a considerable amount of water for a long time. In fact, the tests present in the patent in suit (examples 15

and 16 and table on page 50), concern only the dispensing from a dispensing drawer of a washing machine, i.e. under very different conditions wherein the article is placed in the dispensing drawer and water is passed for a short time through the dispensing drawer.

Therefore, any unproved alleged advantage linked to the selection of the thickness of the PVA film has to be disregarded in the evaluation of inventive step (see T 1051/97, point 7.3 of the reasons).

1.1.5 As regards the Respondent's objection that documents (5) and (8) could not be combined with each other since they relate to different technical means, which objection was allegedly supported by T 570/91, the Board remarks that, as explained above, the disclosures of documents (5) and (8) would be considered by the skilled person to be both applicable to handwashing. Moreover, the mentioned decision concerned only the selection of a document as closest prior art (see points 4.4 and 4.5 of the reasons) and did not concern the combination of the teaching of two disclosures which could be envisaged by a skilled person in an obvious way. Therefore, this decision is not applicable to the present case.

1.1.6 Therefore, the Board concludes that it would have been obvious for the skilled person, faced with the technical problem mentioned above, to encapsulate the highly concentrated softening compositions disclosed in document (5), which were also suitable for use by handwashing, with a PVA film, as suggested in document

(8), for obtaining a softening article, which is more easy and convenient to handle.

Hence, the subject-matter of claim 1 according to the main request does not involve an inventive step.

2. Respondent's auxiliary request 1

2.1 Clarity

Claim 1 of auxiliary request 1 concerns a process including the use of an article as claimed in the main request and comprising the steps of placing the article in a dispensing device of a washing machine and adding an amount of water sufficient to dilute the composition.

The wording "adding an amount of water sufficient to dilute the composition" was considered not to be clear by the Appellant, since the claim does not specify at which point of the process water is added.

However, the Board remarks that the functioning of a washing machine, the sequence of steps in a washing process involving a rinse step in which the fabric softener is required and the suitable dispensing means were well known to the skilled person at the priority date of the patent in suit (see also paragraph 2 of the patent in suit).

Therefore, since the disputed wording specifies that water is added to dilute the composition, it can relate only to the step of adding water to the composition after it has been dispensed from the encapsulated article.

The Board thus concludes that the wording of claim 1 is clear.

2.2 Inventive step

- 2.2.1 The Board remarks that claim 1 is not limited to a process wherein the claimed article is placed in a dispensing drawer of a washing machine but includes its use in any type of dispensing device which can be used in a washing machine.

Therefore, the technical problem formulated by the Respondent (see point 1.1.3 above), does not concern the entire claimed subject-matter. Hence, the Board finds that the technical problem underlying the invention has to be formulated in a more general way as the provision of another process of dispensing a highly concentrated fabric softening composition by using an article which is more easy and convenient to handle and is suitable for dispensing the composition to the rinse liquor in a washing machine.

The Board has no doubt that the process of claim 1 solved this technical problem.

- 2.2.2 As already remarked in point 1.1.4 above, it was already known from document (8) to use a unit dose of a highly concentrated softening composition by encapsulating it with a readily water-soluble film, such as PVA, in order to obtain an article in a form which is more convenient for household use and handling (see document (8), page 1, lines 18 to 23; page 3, lines 48 to 62).

Moreover, it was also known from document (8) that such an article was suitable for use in the drum of a washing machine, as shown in example III, in the last rinse of a washing process. On the other hand, document (5), though relating mainly to the use of the concentrated softening composition from automatic dispensing means such as a dispensing drawer, is not limited to such a use but extends explicitly to any use in and out of the washing machine, thus including also a use directly into the drum (column 1, lines 9 to 14; column 2, lines 9 to 11; column 6, lines 43 to 47).

Therefore, it would have been obvious to the skilled person to use a PVA film of document (8), suitable for use in the drum of a washing machine during the rinse, for encapsulating the highly concentrated compositions of document (5) in order to obtain an article having a form more easy and convenient to handle and suitable for being dispensed into the rinse step of a washing process. Moreover, it would have been obvious for the skilled person to add the article to the drum of the washing machine by using any dispensing device already known in the art. In fact, considering the considerable amount of water present in the rinse step, the skilled person would have expected the article to dissolve to a sufficient extent for releasing the softening composition.

2.2.3 As regards the thickness of the PVA film, the Board remarks that the tests contained on page 50 of the patent in suit do not concern a use directly into the drum of a washing machine. Therefore, as explained in point 1.1.4 above, also in this case any unproved

alleged advantage linked to the selection of the thickness of the PVA film has to be disregarded in the evaluation of inventive step.

2.2.4 The Board concludes that the subject-matter of claim 1 lacks an inventive step.

3. Respondent's auxiliary request 2

3.1 Clarity

Claim 1 according to the Respondent's **second auxiliary request** differs from claim 1 of first auxiliary request only insofar as the wording "dispensing device" in the last but one line of the claim is replaced with "dispensing drawer".

Hence, as regards clarity, the same arguments exposed in point 2.1 above apply *mutatis mutandis* to this claim.

3.2 Inventive step

3.2.1 Claim 1 of this request is limited to a process including the step of placing the article in a dispensing drawer of a washing machine.

Therefore, the Board finds that the technical problem underlying the invention can be formulated in line with what was submitted by the Respondent as the provision of another process of dispensing a highly concentrated fabric softening composition by using an article which is more easy and convenient to handle and is suitable for dispensing the composition to the rinse liquor from a dispensing drawer of a washing machine.

The examples 15 and 16 and the table on page 50 of the patent in suit show convincingly that such articles can be used satisfactorily in the dispensing drawer of a washing machine. In particular, paragraphs 285 to 287 show that an article containing a PVA film of 25 μm begins to disintegrate in the dispensing drawer after 4 or 8 seconds and the fabric treated has good softness and little or no staining or residues. Moreover, paragraph 288 states that a preferred range of thickness for PVA films of the KP-06 type is 20 to 60 μm ; this is confirmed by the table on page 50 showing very good results for films having a thickness of 42 and 62 μm placed in a dispensing drawer. Therefore, even though the same table shows that another PVA film having a thickness of 38 μm appears not to be particularly good except when it is used in combination with a specific type of washing machine, the overall tests show coherently that the claimed articles can be used in the dispenser drawer of a washing machine for dispensing the highly concentrated softening composition to the rinse liquor.

The Board thus is convinced that the claimed process solves the technical problem underlying the invention mentioned above.

- 3.2.2 The Board remarks that neither document (8) nor the remaining prior art disclosed the possibility of using an encapsulated liquid softening composition directly into the dispensing drawer of a washing machine.

Moreover, it was known to the skilled person that the conditions occurring in the dispensing drawer wherein

cold water flows through the drawer for a short time are very different from those occurring in the drum of the washing machine wherein a considerable amount of water is present during the rinse step.

Therefore, the teaching of document (8) that PVA films dissolve readily in water in the drum of a washing machine (page 3, lines 58 to 62 and example III) would have not suggested to the skilled person that such articles would dissolve sufficiently rapidly under the conditions occurring in a dispenser drawer wherein cold water flows, may be repeatedly, through the drawer for a short time.

The cited prior art is completely silent about the capacity of a PVA film to dissolve sufficiently rapidly under such special circumstances in order to enable the softening composition to be dispensed to the rinse liquor in the washing machine.

Therefore, in the absence of an explicit teaching in the prior art about the suitability of encapsulated articles for use in a dispenser drawer of a washing machine or about technical characteristics of PVA films indicating their suitability for a rapid dissolving under a stream of water of the type used in such a dispenser drawer, it would have not been obvious for the skilled person to encapsulate the compositions of document (5) with a PVA film as taught in document (8) for using it in a dispensing drawer of a washing machine.

- 3.2.3 The Board thus concludes that the subject-matter of claim 1 of the auxiliary request 2 involves an inventive step.

Order

For these reasons it is decided that:

The case is remitted to the Opposition Division with the order to maintain the patent on the basis of auxiliary request 2 submitted with the letter dated 21 December 2010.

The Registrar:

The Chairman:

D. Magliano

P.-P. Bracke