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Datasheet for the decision of 22 October 2012

Case Number: T 0378/11 - 3.3.06

Application Number: 04719513.6

Publication Number: 1601753

IPC: C11D 17/00, C11D 17/04, C11D 3/39

Language of the proceedings: EN

Title of invention:
Package comprising a detergent composition

Patentee:
Reckitt Benckiser N.V.

Opponents:
The Procter & Gamble Company
Unilever N.V.

Headword:
Detergent compositionwith PAP particles having a specific granulometry/RECKITT

Relevant legal provisions:
EPC Art. 123(2)

Relevant legal provisions (EPC 1973):
EPC Art. 83, 84, 54(1)(2), 56

Keyword:
"Amendment beyond original disclosure - main request (no)"
"Clarity - main request (yes)"
"Sufficiency of disclosure - main request (yes)"
"Novelty - main request (yes)"
"Inventive step - main request (yes)"

Decisions cited:
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Catchword:
-

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Case Number: T 0378/11 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 22 October 2012

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Decision under appeal: **Interlocutory decision of the Opposition Division of the European Patent Office posted 17 January 2011 concerning maintenance of European patent No. 1601753 in amended form.**

Composition of the Board:

Chairman: P. Ammendola
Members: E. Bendl
U. Tronser

Summary of Facts and Submissions

I. The appeals lie from the decision of the Opposition Division to maintain the European patent no. 1 601 753 in amended form.

II. Opponent I/Appellant I filed on 08 February 2011 an appeal against this decision, paid the appeal fee on 17 February 2011 and submitted the grounds of appeal on 27 May 2011.

III. Opponent II/Appellant II filed on 14 March 2011 an appeal against the said decision. The appeal fee was received on the same day. The grounds of appeal were received on 26 May 2011.

IV. The following anticipations were among others cited by the Appellants in the course of the appeal procedure:

D2 = EP-A-0 442 549
D4 = WO-A-02/42400
D6 = EP-A-1 344 815
D8 = WO-A-02/074891
D19 = M.S.Showell, Powdered detergents, Marcel Dekker Inc., 1998, p. 178-179

V. The Appellants requested that the decision under appeal be set aside and that the European patent no. 1 601 753 be revoked.

The Respondent requested that the patent be maintained on the basis of the claims according to the main request submitted with the letter dated 21 September 2012 und the description submitted during the oral

proceedings as main request or in the alternative that the patent be maintained on the basis of the claims according to the main request but with the description according to the auxiliary request submitted during the oral proceedings or that the patent be maintained according to the auxiliary requests 1A, 1B, 2, 3 or 4 submitted with the letter dated 21 September 2012.

VI. The independent claims of the main request read as follows:

"1. A package comprising a detergent composition enclosed by a water-soluble or water-dispersible packaging material, wherein the detergent composition comprises a carrier fluid selected from hydrophobic oils such as paraffin oil, vegetable oils (e.g. olive oil/sunflower oil) and silicone oil and encapsulated phthalimidoperhexanoic acid (PAP) in granular form, wherein the PAP has a particle size of from 10-500 µm, more preferably 10-300 µm, more preferably 200—300 µm (e.g. about 250 µm)."

"10. A detergent product comprising a package according to any one of claims 1 to 9."

"11. A detergent product, wherein the product comprises a water soluble/water dispersible body containing a detergent composition having a package according to any one of claims 1 to 10 contained therein/attached thereto."

"12. A detergent product, wherein the product comprises a detergent tablet having a package according to any

one of claims 1 to 10 contained therein/attached thereto."

"13. Use of a product/package in accordance with any one of claims 1 to 12 for the washing and treatment of clothes and the washing of hard surfaces including glassware and kitchen ware."

Claims 2-9 are dependent on Claim 1.

VII. The main arguments of the **Appellants** were as follows:

Admissibility

D19

– The document describes the common general knowledge of a skilled person with regard to the particle size of bleaches used in detergent composition. Although late filed, the document should be introduced into the procedure.

Claims of the main request

Article 123(2) EPC

– The deletion of the term "polyethylene glycol" from the list of examples cited in the patent-in-suit changes the meaning of the general expression "hydrophobic oils" in Claim 1. Therefore the amendment goes beyond the content as originally filed.

Article 84 EPC 1973

– Given the use of expressions like "e.g." and "such as" the wording of Claim 1 of the main request becomes unclear.

– Furthermore, due to the listing of several examples in Claim 1 the wording is not concise any more.

Article 83 EPC 1973

– It is not defined in the patent-in-suit, whether the particle size refers to absolute dimensions or to mean values.

– Furthermore, even when assuming that the mean average particle sizes were used, no indication would be given as to which kind of average values (number average, weight average) are used. Thus, the invention is so insufficiently disclosed that a skilled person cannot re-work it.

Article 54(1),(2) EPC 1973

– The combination of Claims 1+9+10+12+18+19 of D4 discloses compositions according to Claim 1 of the main request. Therefore, novelty of the subject-matter of this claim is not given.

Article 56 EPC 1973

– Either of D8,D6,D4 or D2 is the closest prior art document. Each of these documents taken alone or in combination with each other or with D19 leads to the claimed subject-matter. Thus, an inventive step is not given.

Amended description

Main request

– The examples of the patent-in-suit do not contain a carrier liquid. This is in contrast to the wording of the claims.

Auxiliary request

– No comment was made.

The main arguments of the **Respondent** were as follows:

Admissibility

D19

– The document was submitted late and only incomplete information (two pages copied out of a textbook) was provided. Therefore the disclosure should not be admitted into the procedure.

Claims of the main request

Article 123(2) EPC

– The meaning of the term "hydrophobic oils" remains unchanged compared to the application as originally filed. Therefore, the deletion of embodiments cited in the description cannot offend the requirements of Article 123(2) EPC.

Article 84 EPC 1973

– The oils listed in Claim 1 refer to preferred embodiments of a hydrophobic carrier fluid, this becomes clear from the wording used. No lack of clarity or conciseness can be found.

Article 83 EPC 1973

– The particle size referred to in the patent-in-suit relates to mean values, as can be derived from the use of a single value in Claim 1 and from the examples.

Article 54(1),(2) EPC 1973

– D4 does not disclose encapsulated PAP. Therefore, novelty of the claimed subject-matter vis-à-vis D4 is given.

Article 56 EPC 1973

– The improved bleaching effect related to the size of the PAP particles is not derivable from any of the cited documents or their combinations.

Amended description

– No comments were made.

Reasons for the Decision

1. *Priority*

In the course of the oral proceedings the Respondent has admitted that the oldest priority (GB0305493) of the patent-in-suit is not valid and that therefore D6 represents state of the art according to Article 54(2) EPC 1973.

2. *Admissibility of D19*

2.1 D19 was filed less than two months prior to the oral proceedings. Although late filed, Appellant I argued that D19 represented common knowledge because "every scientist is familiar with the effect of particle size on surface area and the effect of surface area on dissolution rate" (Appellant I's letter of 31 August 2012, page 5, last paragraph).

2.2 The Respondent considered this document as being late filed and incomplete, since only two pages of the textbook were submitted.

2.3 Although being late filed, the Board acknowledges Appellant I's argument, that the cited passage on page 179 of D19, referring to **the relation of crystal size, surface area and solubility**, is common knowledge to a skilled person. The fact that only parts of the textbook have been submitted, does not play a role in the particular case.

2.4 Therefore, D19 is admitted into the proceedings.

Claims according to the main request

3. *Article 123(2) EPC*

3.1 Paragraph [0035] of the description as granted contains examples of the carrier fluid used for the detergent composition. Among these hydrophobic oils and polyethylene glycol (PEG) are mentioned. In the amended description (main request and auxiliary request) presented by the Respondent the passage referring to PEG has been deleted. According to the Appellants this represents an infringement of the requirement of Article 123(2) EPC, because of a change of the meaning of the term "hydrophobic oils" used in Claim 1.

3.2 The Board cannot follow the Appellants' arguments. Although the term "hydrophobic" does not precisely define which compounds fall within its definition in the grey area between "hydrophilic" and "hydrophobic", it is known to the person skilled in the art that PEG

is not "hydrophobic". This is for instance confirmed by D8, page 7, lines 8 and 13, where PEG is referred to as being "water-soluble".

3.3 Thus, the skilled person would read paragraph [0035] of the patent-in-suit as citing hydrophobic oils and PEG as different examples of a suitable carrier fluid. The deletion of PEG from this list of examples does not change the meaning of the term "hydrophobic oils" and does therefore not infringe the requirement of Article 123(2) EPC.

4. *Article 84 EPC 1973*

4.1 The Appellants objected that expressions like "e.g." and "such as" used in Claim 1 would render the meaning of the claim unclear.

4.2 In the present case the Board cannot share the Appellants' view. The objected passage reading "the detergent composition comprises a carrier fluid selected from hydrophobic oils such as paraffin oil, vegetable oils (e.g. olive oil/sunflower oil) and silicone oil and encapsulated phthalimidoperhexanoic acid (PAP)..." describes that the detergent composition comprises a hydrophobic carrier oil and encapsulated PAP. The various compounds listed are merely examples of the hydrophobic oils; olive oil and sunflower oil are specific examples of vegetable oils. Thus, the wording per se is considered to be clear.

4.3 In addition, in the present case the mention of a limited number of examples representing preferred embodiments of one ingredient of the detergent

composition is not considered to infringe the requirement of conciseness either.

4.4 Thus, the requirement of Article 84 EPC 1973 is considered to be met by Claim 1 of the main request.

5. *Article 83 EPC 1973*

5.1 Claim 1 of the main request refers to "a particle size of from 10-500 µm, more preferably 10-300 µm (e.g. about 250 µm)". According to the Appellants the skilled person does not know what the size refers to, i.e. whether the ranges refer to absolute dimensions or to mean values.

Furthermore, if the latter case were to be assumed, it would not be sufficiently disclosed whether the number average particle size, the weight average particle size or similar parameters were to be used. Given this alleged lack of sufficient disclosure the skilled person was considered not to be in a position to re-work the teaching of the patent-in-suit.

5.2 Although Claim 1 refers to ranges, also a discrete value ("about 250 µm") is cited. Being aware that particles of exactly **one specific particle size** are practically not feasible on an industrial scale, it can only be concluded that the values disclosed in Claim 1 refer to the **average** particle size.

5.3 This point of view is supported by the examples on file. Examples 1-4 refer to particle sizes of 200, 250 and 500 µm. Starting from these tests carried out with specific average particle sizes it is concluded that a

particle size range between 200 and 500 µm gives best bleaching cleaning results (paragraph [0087]). Tablet Example 1 even refers explicitly to the **average** particle size of 250 µm and the Comparative Example 1 relates to an **average** particle size of greater than 750 µm, as distinguished from the corresponding absolute particle sizes ranging between 300-1100 µm.

The conclusion to be drawn from these examples is, that the particle sizes defined in the patent-in-suit refer, unless otherwise indicated, to **average** particle sizes.

5.4 The Appellants furthermore argued, that even if the Board would come to the conclusion that average particle sizes were meant, no indication as to the **kind** of average particle size were given (number or weight average particle size). However, no proof has been submitted by the Appellants, that the lack of indication as to the precise kind of average particle size hinders the skilled person from carrying out the present invention.

5.5 Even when considering the Annexes 1 and 2 of Appellant I's letter of 31 August 2012 as an adequate determination of the various mean particle sizes, they only show that these mean values differ. On the contrary, it is also shown that at least some of these values fall within the range presently claimed. Thus, the skilled person could select those kinds of mean values falling within the range 10-500 µm in order to prepare a composition according to the present invention. Whether or not the use of two kinds of mean values leads to different results is a matter of clarity, rather than sufficiency of disclosure. However,

the Board has no authority to determine clarity of the feature in question, as this feature was already present in the set of claims as granted.

5.6 Thus, the requirement of Article 83 EPC 1973 is considered to be met.

6. *Article 54(1),(2) EPC 1973*

6.1 Appellant I objected that compositions according to present Claim 1 would be anticipated by D4. In particular the combination of Claims 1+9+10+12+18+19 was considered to disclose compositions as claimed. Although the feature "encapsulated PAP" was not mentioned in the cited claims, the Appellants argued, that the feature would be met by the enclosure of the composition in a pouch.

6.2 The Board cannot share this opinion. Claim 1 refers to "a package comprising a detergent composition enclosed by a [...] packing material, wherein the detergent composition comprises [...] encapsulated [...] PAP". This means that the **encapsulated** PAP is **enclosed** by the packing material. Such a feature has not been disclosed in D4. The passage on page 15, last paragraph of D4 relating to optional coating of the bleaching agent does not necessarily relate to PAP. Thus, no direct and unambiguous disclosure of the cited feature can be found in D4.

6.3 As pointed out by the Respondent, this view has also been supported by the Appellants themselves in their letters of 06 April 2010, page 3, fourth full paragraph and of 26 May 2011, page 3, fourth full paragraph,

where both parties stated that encapsulated PAP granules cannot be found in D4.

6.4 Thus, the requirement of novelty is met by the subject-matter of Claim 1 of the main request.

7. *Article 56 EPC 1973*

7.1 The problem as defined in the present invention was the provision of a detergent composition comprising quickly dissolving PAP particles resulting in improved bleach activity.

The Appellants cited documents D2,D4,D6 and D8 as closest prior art documents.

D2 refers to aqueous liquid bleaching compositions being highly effective for the bleaching of substrates.

The aim of D4 is the provision of a unit dose dishwashing product with improved processing and dissolution characteristics.

The examples 4-6 of D6 illustrate that dishwashing composition with improved bleaching performance may be produced by using coated PAP particles.

D8 teaches about dishwashing compositions achieving excellent cleaning properties and excellent glass appearance without leaving a detergent residue.

Only D2 and D6 explicitly refer to bleaching improvement. D2 reports on PAP particles whose sizes may range between 10 and 1000 µm. Although silicone

oils may be present as suds controlling agents, neither specific amounts of hydrophobic oils sufficient to act as carrier fluid, nor a water-soluble or water-dispersible packing, nor the encapsulation of PAP are mentioned.

In contrast thereto D6 reports on **coated** PAP particles having dimensions ranging between 50-5000 µm, which may be present in a sachet. Thus, given the fact that D6 relates to the same problem **and** has more features in common with Claim 1 of the patent-in-suit, D6 is regarded to be the closest state of the art.

7.2 The problem of the patent-in-suit vis-à-vis D6 is the provision of a detergent composition with improved bleaching performance.

7.3 The package according to Claim 1 of the main request was proposed as a solution for this problem.

D6 differs from the present Claim 1 in the carrier fluid and the selection of a specific PAP particle size.

7.4 Table 1 of the patent-in-suit highlights that compositions with encapsulated PAP particles with an average diameter in the range of 10-500 µm show an improved bleaching effect compared to a similar composition with PAP particles having an average diameter outside this range. The Appellants have not disputed this effect as such.

The examples and comparative examples of the patent-in-suit differ from the compositions according to Claim 1

of the main request in that the examples do not contain a carrier fluid.

However, the carrier fluid is described in paragraph [0035] of the patent-in-suit as an **optional** feature: "The composition **may** comprise a carrier fluid" (emphasis added). Thus, the Board considers the effect shown by the examples to be applicable to compositions comprising a carrier fluid.

As no objection in this respect was raised by the Appellants, the Board does not have a reason to assume that the posed problem has not been solved over the entire range claimed.

7.5 The remaining question to clarify is whether the effect shown was obvious when starting from the closest state of the art.

Although D6 refers to bleaching, no distinction in bleaching activity of specific particle sizes within the particle size range of 50 to 5000 µm has been shown. Thus, an improved bleaching effect caused by the selection of a specific particle size cannot be derived from this document alone.

The combination of D6 with D19 was regarded by the Appellants to lead towards the claimed invention.

However, when reading the second full paragraph on page 179 of D19, referred to by the Appellants, the following text can be found: "Particle or crystal size is a key variable relating to stability, and can be increased to maximize stability. Increasing crystal

size can have a negative impact on rate of solubility, leading to reduced bleaching performance and potentially increased dye damage."

This means that, although the skilled person knows that the reduction of the particle size improves bleaching performance, the skilled person would refrain from reducing the particle size too much, because of stability problems. Thus, this disclosure teaches away from the use of small particles but rather recommends to find a balance. Applying this teaching to the range of 50 to 5000 µm given in D6, it cannot be concluded that a combination of D6 with D19 points towards the use of the range of 10-500 µm.

In addition also the remaining documents cited by the Appellants do not hint towards the use of the average particle size between 10-500 µm to achieve improved bleaching properties.

7.6 Thus, the subject-matter of Claim 1 of the main request involves an inventive step.

7.7 Similar considerations apply to Claims 2-9, which are dependent on Claim 1 and to Claims 10-13 either claiming products comprising the composition according to Claim 1 or to the use of such products.

Amended description

8. *Main request*

8.1 The Appellants objected, that the examples cited in the description did not contain a carrier fluid, as required by Claim 1 of the main request.

8.2 The Board shares this view, as no hydrophobic oil is present in sufficient amounts to act as a carrier. Thus, a contradiction exists between the wording of the examples and the claims.

8.3 Therefore the requirements of Article 84 EPC 1973 are not considered to be met.

9. *Auxiliary request*

9.1 No objection with regard to the auxiliary request of the description has been raised by the Appellants. Given the fact, that the objected examples have been marked accordingly, the Board is of the opinion that the description supports the claims.

10. Therefore, the auxiliary request of the description is considered to meet the requirement of the EPC.

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 following basis: claims according to the main request filed with the letter dated 21 September 2012 together with the description according to the auxiliary request submitted during the oral proceedings.

The Registrar | The Chairman

D. Magliano | P. Ammendola