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**Datasheet for the decision
of 28 September 2010**

Case Number: T 1795/07 - 3.3.06

Application Number: 95915032.7

Publication Number: 0755434

IPC: C11D 3/386

Language of the proceedings: EN

Title of invention:

Detergents containing a builder and a delayed release enzyme

Patentee:

THE PROCTER & GAMBLE COMPANY

Opponent:

Henkel AG & Co. KGaA

Headword:

Detergent with enzyme/PROCTER

Relevant legal provisions:

EPC Art. 123(2)

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Inventive step (main request): no - arbitrary selections"
"Added subject-matter (all auxiliary requests): yes"

Decisions cited:

-

Catchword:

-



Case Number: T 1795/07 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 28 September 2010

Appellant: THE PROCTER & GAMBLE COMPANY
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 22 August 2007
revoking European patent No. 0755434 pursuant
to Article 102(1) EPC 1973.

Composition of the Board:

Chairman: P.-P. Bracke
Members: P. Ammendola
U. Tronser

Summary of Facts and Submissions

I. This appeal is from the decision of the Opposition Division to revoke European patent No. 0 755 434 concerning detergent compositions containing a water-soluble builder (hereinafter WS builder) and a delayed release enzyme because the subject-matter of the granted claims and those of the then pending auxiliary request lacked of inventive step.

II. Claim 1 of the **granted patent** as published read as follows:

"1. *A detergent composition containing*
(a) a water-soluble builder; and
(b) an enzyme
wherein a means is provided for delaying the release to a wash solution of said enzyme relative to the release of said water-soluble builder such that in the T50 test method herein described the time to achieve a concentration that is 50% of the ultimate concentration of said water-soluble builder is less than 60 seconds and the time to achieve a concentration that is 50% of the ultimate concentration of said enzyme is more than 50 seconds, wherein the means comprise a coating which delays the release of the enzyme and also comprise one or more of (1) a coating on the builder which accelerates release of the builder and (2) selection of the particle size of the builder to less than 1200 μm and an average particle size of 1100 to 500 μm ."

The published claim differs from its originally granted version (the "Druckexemplar" prepared by the Examining Division) in that the expression "50 seconds" of the published claim was instead "90 seconds" in the originally granted version.

III. The grant of the European Patent had been opposed, *inter alia*, on the grounds of lack of inventive step.

The Opponent had cited in the grounds of opposition, *inter alia*, the document

D2 = DE 2 318 930.

The Patent Proprietor had requested, *inter alia*, the correction of the error of transcription occurred in the publication of the granted patent.

IV. In the decision under appeal document D2 was identified as being a US patent belonging to a different technical field.

In respect of claim 1 as granted the Opposition Division indicated, *inter alia*, the following reasons:

- The technical problem stated in the opposed patent was to obtain a detergent composition for use in a washing method having an enhanced stain/soil removal performance.
- Said problem had been solved in the contested patent by a composition comprising a WS builder and an enzyme, the release into the wash of the

enzyme being required to be delayed relative to the release into the wash of the WS builder.

- document D2 was considered as the closest prior art because said document appeared to have already solved the same technical problem addressed in the opposed patent by delaying the release of the enzyme after that of optional builder(s) and after or together with that of a mandatory pH regulating agent.
- The patented subject-matter differed from this prior art in the selection of builders having a particle size within the range defined in claim 1 and displaying a T50 value of less than 60 seconds, as well as in the T50 value of more than 90 seconds for the coated enzyme.
- The Patent Proprietor had not shown any technical effect to descend from the selected T50 values and the selected particle size of the builder was an arbitrary choice among a very large pallet of possible values.
- Therefore, the composition of claim 1 of the opposed patent was considered an alternative to the prior art which was obvious for the skilled man in view of document D2.

V. The Patent Proprietor (hereinafter Appellant) lodged an appeal against this decision. It filed with the grounds of appeal four sets of amended claims respectively labelled as **first to fourth auxiliary requests**.

The different versions of claim 1 contained in these auxiliary requests have in common the amendment (hereinafter the shared amendment) consisting in the replacement of the passage present in claim 1 as granted that reads

"water-soluble builder such that"

by

"water-soluble builder and for accelerating the release to a wash solution of said builder relative to the release of enzyme-containing detergent composition such that".

In the last paragraph of the grounds of appeal the Appellant announced its intention, in case of any objection would be raised to the shared amendment, to file further auxiliary requests in which the objected wording would be amended or entirely absent.

The Respondent replied in writing to the grounds of appeal, arguing, *inter alia*, that the shared amendment rendered claim 1 according to any of the first to fourth auxiliary requests contrary to Article 123(2) EPC.

In a communication enclosed to the summons to oral proceedings, the Board, *inter alia*, requested the Parties to confirm whether the document D2 referred to in their written submissions was that cited in the grounds of opposition or the apparently erroneous US reference indicated in the decision under appeal.

With letter of 7 July 2010 the Respondent confirmed that document D2 corresponded to DE 2 318 930.

Oral proceedings took place as scheduled on 28 September 2010 in the announced absence of the Appellant.

VI. The Appellant's arguments submitted with the grounds of appeal are the following:

The Opposition Division had failed to properly appreciate the differences between the patented detergent compositions and those of document D2 and, thus, had not properly identified the technical problem actually solved. In particular, the Appellant argued that "*... the release into the wash of water-soluble builder is required by claim 1 to have a T50 of less than 60 seconds. **This means** that release of the water-soluble builder is accelerated as compared to the usual rate of release of builder into the wash, and therefore that the rate of release of the builder is accelerated as compared to the rate of release of all other detergent ingredients. Evidence that this is the case is clearly provided by paragraphs 5, 7 and 9 of the Patent which refer to pretreatment with water-soluble builder, prior to washing with a product, containing detergent and enzyme. Claim 1 requires that the acceleration of builder release is effected by means of either (1) a coating, or (2) a small particle size*" (see the grounds of appeal the last paragraph on page 1 and the first on page 2, emphasis added by the Board).

Consistently with this consideration the Appellant argued further (on page 2, sixth and seventh

paragraphs) that "the accelerated release of the water-soluble builder of the present invention provides an additional point of novelty over document D2. ... this point of novelty gives rise to the pretreatment of soiled substrates with water-soluble builder **prior to washing with other detergent constituents**. This pretreatment was surprisingly found to rise to improved stain and soil removal, as mentioned at paragraph 5 of the application as filed. ... paragraph 5 of the application as filed plainly indicates that there are advantageous stain and soil removal **associated with this sequence of release**" (emphasis added by the Board).

Thus, the objective technical problem solved by the invention vis-à-vis the prior art was how to improve stain and soil removal.

There would be absolutely no teaching in document D2 that would lead the skilled man to perform pretreatment with WS builder in order to improve stain and soil removal. Indeed the use of a builder was merely optional in document D2, and the specific use of a WS builder was recited as just one of these options. Hence, this citation provided no disclosure of any means by which the release into the wash water of the pH regulating or the builder agent was "accelerated".

Therefore, the patented detergent composition was inventive over document D2 alone.

As to the basis in the patent application as originally filed for the shared amendment present in each version of claim 1 of the first to fourth auxiliary requests,

the Appellant just referred to paragraph 5 on page 1 of the patent application.

VII. The Respondent's arguments presented in writing and orally may be summarised as follows:

The Appellant's allegation that the T50 of less than 60 seconds corresponded to an exceptionally fast rate of release of the WS builder into the wash was not credible already because no concept of "*usual rate of release of builder*" existed in the technical field.

Moreover, this allegation had not even an implicit support in the patent in suit. In particular, no statement implying an "accelerated" release of the WS builder could be found in the vague wording used in the passages of the patent specifications referred to by the Appellant. These passages only vaguely described a pretreatment washing method without even indicating if the WS builder present in the first step thereof (i.e. the step, hereinafter indicated as the pre-step, wherein the soiled substrate is pretreated with the WS builder) and the enzyme and the detergent present in the second step thereof (i.e. the step, hereinafter indicated as the wash-step, wherein the soiled substrate is washed with an enzyme-containing detergent product) had all been released by one and the same detergent composition possibly according to claim 1, and/or if the WS builder had been released therefrom before all other ingredients.

The sole "acceleration" of release of the WS builder disclosed in the patent in suit was that possibly displayed in the invention embodiments containing a

coated WS builder and, in any case, only to the extent that this ingredient entered the wash solution prior to the enzyme and not, as alleged by the Appellant, also prior to any other non-enzyme ingredient of the detergent composition.

The WS builder particle size required in claim 1 as granted was conventional for this class of routine ingredients and the patent in suit contained not even allegation that the specific minimum difference of 30 seconds between the T50 values of the enzyme and the WS builder required in the granted claim provided some advantageous technical effect not present when the difference in T50 was e.g. less than 30 seconds. Hence, the alleged advantages in stain and soil removal were not credible vis-à-vis this prior art already containing delayed release enzymes.

Therefore, the finding of the Opposition Division in respect of the granted claims was correct.

The Respondent argued also that all auxiliary requests were to be rejected already because the shared amendment identified above was contrary to Article 123(2) EPC. The vague wording of paragraph 5 on page 1 of the patent application was not necessarily describing the use of a detergent composition according to claim 1 and, in any case, certainly contained no explicit or implicit disclosure of means for accelerating the release of the WS builder in respect of the enzyme and the detergent.

VIII. The Appellant requested in writing that the decision of the first instance be set aside and that the patent be

maintained with the claims as granted (i.e. that the opposition be rejected) or, alternatively, that the patent be maintained on the basis of any of the first to fourth auxiliary requests submitted with the grounds of appeal.

The Respondent requested that the appeal be dismissed.

Reasons for the decision

Main Request (patent as granted)

1. Inventive step (Article 100(a) in combination with Articles 52(1) and (2) and 56 EPC 1973): claim 1
 - 1.1 It is apparent that claim 1 of the published version of the patent in suit contains an error of transcription in respect of the version originally approved by the Patent Proprietor and that the Examining Division has decided to grant. This error was already mentioned during the opposition proceedings and the decision under appeal is manifestly based on the originally granted version of this claim.

Accordingly, also the following decision is reasoned as if the wording of granted claim 1 would not contain such evident transcription error and, thus, would define the minimum T50 of the enzyme as "*more than 90 seconds*" (rather than "*more than 50 seconds*").

- 1.2 Claim 1 defines a detergent composition containing WS builder and enzyme wherein the former displays in the T50 test method a value of less than 60 seconds and is

(1) coated with a coating which accelerates its release and/or (2) selected to possess particle size of less than 1200 μm and an average particle size of 1100 to 500 μm . For the enzyme ingredient the claim requires a T50 value of more than 90 seconds to be produced by means of a coating that delays the release of the enzyme.

- 1.3 The finding of the Opposition Division that the detergent compositions containing coated enzymes disclosed in the examples of document D2 represent a suitable starting point for the assessment of inventive step has not been disputed by the Parties and the Board sees no reason to depart from this finding.

It is also undisputed that these detergent compositions of the prior art release the enzyme in the wash water after or together with the mandatory ingredients identified therein as pH-regulating agents and after the optional ingredients identified therein as builders. In particular, the description at page 13, lines 5 to 22, of document D2 makes it clear that the order in the release of the ingredients provided by these detergent compositions maximizes the efficacy of the enzyme in stain removal.

- 1.4 In the decision under appeal it is found that the patented subject-matter only differs from the prior art in the selection of WS builders that have a particle size within the range defined in claim 1 and that display a T50 value of less than 60 seconds, as well as in the selection of coated enzymes having a T50 value of more than 90 seconds.

1.5 The finding of the Opposition Division that the subject-matter of claim 1 as granted only solves the technical problem of providing an alternative to the prior art, has been disputed by the Appellant in the grounds of appeal (see above section VI of the Facts and Submissions) by arguing that the T50 requirement of 60 seconds would **mean** that the rate of release of the WS builder is "accelerated" as compared to the "*usual rate of release*" of this ingredient and, thus, that this ingredient is delivered to the wash solution before any other ingredient. The stain/soil removal advantages indicated in paragraph [0005] of the patent in suit would descend not only from the delayed release of the enzyme but also from the "accelerated" release of the WS builder, preceding that of all other ingredients of the detergent composition. The same advantages could not be expected in the prior art disclosed in document D2, wherein the delivery of the builder in the wash water was not "accelerated".

1.5.1 The Appellant has neither referred to common general knowledge supporting its interpretation of the T50 values nor presented some evidence further supporting its reasoning. Hence, the validity of the Appellant's argument can only be established in view of the disclosure of the patent in suit. The Board considers relevant in this respect that:

- i) The patent in suit makes no explicit mention of any "*usual rate of release of builder into the wash*", or "*that the rate of release of the builder is accelerated as compared to the rate of release of all other detergent ingredients*" or of any similar concept; it only explicitly focuses on the

gap between the rate of release of the enzyme and that of the WS builder (quantified by the difference of 30 seconds between the T50 values defined in the granted claim) (see e.g. from paragraph [0037] to [0057]).

- ii) The patent in suit does not make any direct or indirect disclosure possibly suggesting to the skilled reader that the standard detergent compositions of the prior art containing WS builder would normally release these ingredients at a rate superior to that corresponding to a T50 of 60 seconds and/or that these standard compositions were normally formed using WS builders with particle size outside the ranges indicated in claim 1.

- iii) The sole feature of claim 1 that appears to imply an enhancement of the rate of release of the WS builder is that referring to the option of coating this ingredient. However, this "accelerated" release only occurs in part of the claimed subject-matter (the remainder being represented by all those embodiments of claim 1 in which it is sufficient to appropriately select the particle size of WS builder to achieve the required T50). Moreover, the "acceleration" of release produced by the application of the coating defined in claim 1 does not necessarily imply that the release of the WS builder must occur faster than that of all other ingredients of the detergent composition.

iv) In the patent as published neither the paragraphs [0005], [0007] and [0009] referred to by the Appellant, nor the other passages describing the pretreatment washing method (i.e. paragraphs [0248] to [0251]) imply that the release of the WS builder is in general "accelerated" or is specifically occurring faster than that of all other detergent ingredients possibly present in the same composition from which the WS builder had been released.

In particular, in respect of this last point the Board finds it appropriate to stress that [0005] of the patent as published, corresponding to paragraph 5 on page 1 of the patent application as originally filed, simply recites "*The Applicants have in addition found that stain/soil removal benefits may be obtained when a soiled substrate is pretreated with a solution containing a water-soluble builder, prior to being washed in a method using an enzyme containing detergent product*" (emphasis added by the Board). Hence, it is not even apparent from the vague wording of this paragraph that it refers to a method in which both the pre-step and the wash-step are obtained starting from a (single) detergent composition of the invention, which contain both the enzyme and the WS builder (i.e. this wording allows for the WS builder to be delivered in the pre-step from any sort of composition, e.g. from a composition free of any enzyme, and allows as well for an enzyme and a detergent to be delivered in the wash-step from any sort of composition, e.g. from a composition containing another builder). The same applies to all other cited paragraphs dealing with the pretreatment method.

Moreover, even if one would, for the sake of an argument in favour of the Appellant, assume that these passages were intended to describe the action of a detergent composition according to claim 1 (that initially releases the WS builder, temporarily forming the pre-step solution, and then releases enzyme and detergent, thereby generating the solution for the wash-step), still these passages would not contain any element possibly suggesting that the WS builder has released faster than **all** other ingredients (as alleged by the Appellant). On the contrary, paragraph [0248] explicitly confirms the possible presence in the pre-step of further non-enzyme ingredients in addition to the WS builder. Hence, the description of the pretreatment washing method explicitly discloses that the relative rates of release of WS builder and of the other non-enzyme ingredients may be **so close** to contribute to the formation of the same pre-step solution, rather than possibly implying that the WS builder is necessarily released at faster rate than all other ingredients.

Hence the patent in suit contains not even an implicit allegation that the T50 of 60 seconds in claim 1 would actually mean, as argued by the Appellant, that the rate of release of the (possibly uncoated) WS builder is "accelerated" in respect to its hypothetical "*usual rate of release*" and, even less, that it must be so "accelerated" to dissolve the WS builder in the wash solution before any other ingredient of the composition.

1.5.2 For this reason the Board concludes that the disclosure of the patent in suit does not render credible the Appellant's unsupported allegation that the features of claim 1 as granted would imply the additional technical effect that the patented detergent composition would release the (coated or uncoated) WS builder in the wash water faster than usual in the compositions of the prior art and also faster than any other ingredients thereof.

Of course, this conclusion also deprives of credibility the Appellant's argument based thereupon, that the advantages in terms of stain/soil removal mentioned in paragraph [0005] of the patent in suit derived not only from the delayed release of the enzyme but also from the initial (pretreatment) washing step inevitably produced by the "accelerated" release of the WS builder into the washing liquor.

1.5.3 The Board notes instead the vague wording used for stating the advantages of the invention in paragraph [0005] (or in the similarly worded paragraphs [0004] and [0006]) as well as the absence of any further details (e.g. an experimental comparison) in the remaining patent description explaining or proving the reasons of these statements. Hence, the Board finds that the cited passages do not allow to understand precisely in respect of which (prior art of) reference the alleged advantages had been experimentally observed by the inventors, or for which theoretical reasons the inventors could predict that the level of cleansing produced by the detergent composition of the invention would be advantageous in respect to any prior art not

possessing the combination of features defined in present claim 1.

Hence, these statements are found insufficient at rendering plausible any technical advantage of the patented subject-matter vis-à-vis the detergent compositions with delayed release enzyme and WS builders exemplified in document D2.

The Board sees, therefore, no reason to depart from the finding of the Opposition Division that the claimed subject-matter only solves the technical problem of providing further detergent compositions comprising delayed release enzyme and builder, i.e. only represent an alternative to the prior art.

- 1.6 The Board notes the indisputable (and undisputed) fact that the relevant teaching in document D2 (see e.g. page 13, lines 5 to 22, and page 33, lines 1 to 19) is not limited to detergent compositions based on a specific enzyme with a specific coating for delayed-release and/or on a specific kind of builders, but covers any detergent compositions containing, *inter alia*, any conventional builders and any enzymes with a coating capable of producing delayed release, at least as long as the difference between the release of the builder and that of the enzyme lays preferably between 0.5 to 5 minutes. This teaching is embodied in the examples of document D2, all comprising ingredients which are recognised to be builder in that citation as well as listed among the WS builders in the patent in suit. Hence, and since it is also undisputed that claim 1 of the patent in suit allows for the possible additional presence of other ingredients (such as the

pH regulating agents already present in the examples of document D2), the skilled person aiming at solving the posed technical problem and starting from one of these examples would arrive at the patented composition by just selecting:

A) the particle size for the WS builders already used in the example of the prior art (whose particle size and T50 values are unknown)

and (if necessary)

B) the coating for the enzyme already used in coated form in the example of the prior art (whose T50 value is also unknown)

so that both these ingredients fulfil the requirements given in claim 1 as to the respective T50 value.

The Appellant's allegation that a T50 of less than 60 seconds would be **unusual** for the release of WS builders from detergent compositions represents the **sole** argument of this Party possibly implying that the WS builders and coated enzymes as defined in claim 1 **could not** be found among the conventional alternatives that the skilled person would take into consideration for making further detergent compositions according to the teaching of document D2. However, as already discussed above, this argument has been found unconvincing.

Therefore, the Board concurs with the Opposition Division that the WS builders and the coated enzymes ingredients identified in claim 1 are among the conventional alternatives for these ingredients that

the person skilled in the art would take into consideration for realizing further embodiments of the detergent compositions disclosed in document D2.

Thus, the above identified selections are arbitrary selections among the alternatives that the skilled reader of this citation would take into consideration.

Since no inventive ingenuity is required in order to arbitrarily select one or the other among the various equally promising alternative embodiments of the prior art, the Board sees no reason to depart from the finding of the Opposition Division that the claimed subject-matter was obvious for the skilled person already in view of document D2 alone.

- 1.7 Accordingly, the Board finds that the subject-matter of claim 1 of the granted patent is rendered obvious by the prior art and, thus, contravenes Article 56 EPC 1973. The Appellant's main request is therefore found not allowable.

Appellant's first to fourth auxiliary requests

2. Added subject-matter (Article 123(2) EPC): claim 1 of each of these requests

Each of the versions of claim 1 contained in the auxiliary requests differs from granted claim 1 as published, *inter alia*, for the introduction of the shared amendment (see above section V of the Facts and Submissions).

Paragraph 5 on page 1 of the patent application is the sole passage indicated by the Appellant as basis for this amendment.

Despite the fact that the Respondent has argued already in its reply to the grounds of appeal that this amendment rendered the auxiliary requests contrary to Article 123(2) EPC, no further comments on this issue have been provided by the Appellant.

As indicated already above at point 1.5.1, the wording of paragraph 5 on page 1 of the application (corresponding to paragraph [0005] of the granted patent as published) is so vague that it is not even apparent that it refers to a method obtained by using the claimed detergent composition.

Moreover, even if one would, for the sake of an hypothetical argument in favour of the Appellant, interpret the generic description of the pretreatment method given in this paragraph as suggested by the Appellant (i.e. as describing the action of the detergent composition of the invention, which first releases only the WS builder forming the pre-step solution and then the enzyme and the other non-enzyme ingredients thereby forming the wash-step solution) still this would just imply a **difference** in the dissolution rates between the WS builder and the other ingredients of the patented compositions. Hence, it would still not disclose whether this difference is provided by "*means for accelerating the release*" of the WS builder (mentioned in the shared amendment) or by other means: e.g. by "delaying" the delivery into the wash not only of the enzyme but also of the other

ingredients, or by no additional means at all, in case all other non-enzyme ingredients turn out to possess rates of release sufficiently slower than that of the WS builder.

Hence, the cited paragraph does not provide a basis for the shared amendment of each claim 1 according to the auxiliary requests.

The Board finds, therefore, that the versions of claim 1 according to the first to fourth auxiliary requests violate Article 123(2) EPC and, thus, that none of these requests is allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

D. Magliano

P.-P. Bracke