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**Datasheet for the decision
of 15 September 2010**

Case Number: T 0892/08 - 3.3.06

Application Number: 99949767.0

Publication Number: 1115819

IPC: C11D 1/37

Language of the proceedings: EN

Title of invention:

Detergent granules

Patentee:

THE PROCTER & GAMBLE COMPANY

Opponent:

Henkel AG & Co. KGaA

Headword:

Detergent granules/PROCTER

Relevant legal provisions:

-

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Inventive step: no - arbitrary selection among equally suggested alternatives"

Decisions cited:

T 0002/83, T 0090/84, T 0007/86, T 0939/92, T 0311/95

Catchword:

-



Case Number: T 0892/08 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 15 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 10 March 2008
revoking European patent No. 1115819 pursuant
to Article 102(1) EPC 1973.

Composition of the Board:

Chairman: L. Li Voti
Members: P. Ammendola
M.-B. Tardo-Dino

Summary of Facts and Submissions

- I. This appeal is from the decision of the Opposition Division to revoke European patent No. 1 115 819 concerning detergent granules.
- II. The Opponent had opposed the grant of the patent on the grounds of, *inter alia*, lack of an inventive step (Article 100(a) in combination with Articles 52(1) and (2) and 56 EPC 1973). It had referred, *inter alia*, to the documents:

(4) = US-A-5 431 857,

(5) = WO 98/24876

and

(7) = WO 96/38530.

- III. The Patent Proprietor had requested the Opposition Division to maintain the patent in amended form on the basis of the set of amended claims filed at the oral proceedings of 20 February 2008.

Claim 1 thereof (hereinafter present claim 1) read:

"1. A detergent granule or tablet comprising an anionic surfactant system which comprises an anionic sulphate surfactant and an anionic suphonate surfactant and other detergent active ingredients, the granule or tablet comprising at least a first and a second particulate component

and optionally a binding agent, characterised in that

the ratio of anionic sulphate surfactant to anionic sulphonate surfactant in the particulate components and, when present, in the binding agent, is less than 1:4 or more than 4:1, or even less than 1:5 or more than 5:1; and in that

the first particulate component comprises an anionic sulphonate surfactant and a water-insoluble builder material, wherein the ratio of the anionic sulphonate surfactant to the water-insoluble builder material in the component is less than 1:6 or more than 6:1; and in that

the second particulate component comprises an anionic sulphate surfactant and an inorganic salt, wherein

either (a) the ratio of the anionic sulphate surfactant to the inorganic salt in the component is less than 1:5 or more than 5:1;

or (b) the detergent granule or tablet comprises a polymeric builder material, provided that when the polymeric builder material is present in a particulate component or binding agent comprising an anionic sulphate or even any anionic surfactant, the ratio of the anionic surfactant or anionic sulphate surfactant to polymeric builder material is less than 1:4 or more than 3:1."

IV. The granules (as well as the tablets) according to claim 1 comprise a plurality of particulates with different chemical compositions. The Board finds it

appropriate to use hereinafter the term **non-homogeneous** granule(s) for indicating this kind of structure within each granule. Symmetrically, the term **homogeneous** granule(s) is used hereinafter to indicate granule(s) displaying a substantially uniform, single-phase structure in its(their) interior.

- V. In the decision under appeal the Opposition Division agreed with the parties that the (non-homogeneous) granules disclosed in example 1 of document (4) represented the closest state of the art because this citation addressed substantially the same technical problem indicated in the patent in suit, i.e. to reduce gelling or caking and to improve the dissolution properties of the (homogeneous) detergent granules of the background art, while retaining the dosage uniformity of the latter.

Since the (non-homogenous) granules of example 1 of document (4) were obtained by feeding to a mixer/densifier a distinct stream for each of the relevant ingredients (and thus each of the latter was present in a distinct phase within the resulting non-homogeneous granule), the subject-matter of claim 1 differed from this prior art only in that it required the (non-homogenous) granule to comprise a first particulate component wherein sulphonate and water-insoluble builder material were simultaneously present at a specified amount ratio, as well as a second particulate wherein sulphate and inorganic salt were simultaneously present at a specified amount ratio.

The Opposition Division also noted that the feature that was disclosed in the patent in suit as the measure

resulting in the solution of this technical problem, i.e. to avoid intimate mixing of the anionic sulphate surfactant (hereinafter sulphate) with the anionic sulphonate surfactant (hereinafter sulphonate), was already explicitly acknowledged in document (4) as the solution to the same problem. Therefore, the Opposition Division found, in the absence of any supporting evidence, that the Patent Proprietor's allegation that the claimed subject-matter achieved vis-à-vis this prior art the technical effect of further reduction of gelling and of further improvement of dissolution characteristics was not credible.

The (non-homogenous) granules of document (4) also possessed dosage uniformity, since e.g. the granules produced in example 1 of this citation contained in each granule all the ingredients.

Hence, the objective technical problem solved vis-à-vis this prior art was simply the provision of an alternative detergent composition.

Document (4) imposed no restrictions on the composition of the (non-homogeneous) granules disclosed therein, other than that of feeding the two anionic surfactants in separate streams to the mixer/densifier. Hence, the person skilled in the art was free to investigate the effects, if any, of incorporating the water-insoluble builder material in the sulphonate and the inorganic salt in the sulphate. It followed that independent product claim 1 did not involve an inventive step.

VI. The Patent Proprietor (hereinafter Appellant) lodged an appeal against this decision.

In the grounds of appeal it conceded that document (4) seemed to address a similar problem. It argued however that this citation contained no teaching towards the first and the second multi-component particulates with the ingredient ratio ranges specified in present claim 1. Consequently, there could be no disclosure in this prior art of any advantage provided by these multi-component particulates.

On the contrary, the advantages of the claimed ratio ranges were adequately substantiated by the description at for example page 1, lines 27 to 30, page 3, lines 5 to 6, page 11, lines 20 to 33, and page 12, lines 1 to 34. Based on these clearly substantiated advantages, the technical problem addressed in the patent in suit was identified by the Appellant as "*how to reduce gelling and improve dissolution while maintaining dosage uniformity*" (see the last sentence at page 1 of the grounds of appeal).

Document (4) would rather teach away from the present invention, by explicitly disclosing at column 6, line 27, a preferred range of 1:4 to 4:1 for the amount ratio of sulphate to sulphonate.

The Appellant argued that even if the Board were to find that the objective technical problem solved consisted in the provision of an alternative, the claimed invention was still inventive over document (4) because this latter gave no motivation to the skilled person to include water-insoluble builder materials and salts into the surfactant ingredients in the manner required by claim 1. Therefore, while the skilled

person could make such a selection it was unfounded to state that he would.

The Case Law of the Boards of Appeal - including, for example, T 2/83, T 9/84 and T 7/86 - would substantiate that even if a skilled man could (rather than would) make a selection, this did not render that selection obvious.

The Appellant made no further submission in writing as to the substance of the appeal.

VII. The Opponent (hereinafter Respondent) replied in writing to the grounds of appeal.

Oral proceedings took place on 15 September 2010 before the Board, in the announced absence of the duly summoned Appellant.

VIII. The Respondent's arguments submitted in writing and orally that are relevant for the present decision may be summarised as follows:

Paragraphs [0010], [0052], [0057] and [0060] of the patent in suit would explicitly suggest to completely avoid any sulphate and any water-insoluble builder material in the particulate comprising sulphonate, and any sulphonate and any inorganic salt in the particulate comprising sulphate. Hence, example 1 of document (4) would correspond to those granular detergent compositions that, although possibly no longer encompassed within the subject-matter of present claim 1, were nevertheless disclosed in the patent in suit as the most advantageous embodiments of the invention.

Accordingly, the sole technical problem credibly solved was merely the provision of an alternative to the prior art.

The Respondent stressed that (non-homogeneous) granules containing a first multi-component particulate made of both sulphonate and water-insoluble builder material, as well as a second multi-component particulate made of both sulphate and inorganic salt, whereby each particulate contained the respective ingredients at amount ratios either according or very close to the corresponding amount ratios defined in present claim 1, were also conventional in the field, as evident from documents (5) and (7).

Therefore, no inventive ingenuity was necessary for replacing (at least in part) the relevant four distinct streams used for producing the granule of example 1 of document (4), by two streams of multi-component particulates as those disclosed in document (5) or (7), or slight variations thereof.

The fact that document (4) suggested to use sulphate and sulphonate at a ratio of 1:4 to 4:1 would not lead away from the invention, since this ratio manifestly referred to the amount ratio of these two surfactants in the whole (non-homogeneous) granule and not in any multi-component particulate (possibly present within the granule) containing both sulphate and sulphonate.

IX. The Appellant requested in writing that the decision under appeal be set aside and the patent be maintained with the set of claims filed during the opposition oral proceedings on 20 February 2008.

The Respondent requested that the appeal be dismissed.

Reasons for the decision

Appellant's only request (claims as filed during the opposition oral proceedings)

1. Inventive step (Articles 52(1) and 56 EPC 1973):
claim 1
- 1.1 Present claim 1 (see above section III of the Facts and Submissions) appears to define a detergent non-homogeneous granule or tablet mandatorily comprising sulphate, sulphonate, water-insoluble builder material and inorganic salt, and optionally containing polymeric builder material. The non-homogeneous nature of such a granule/tablet resides in the fact that two multi-component particulates and an optional binding agent are present within each granule/tablet. In particular, the claim requires:
 - an amount ratio of less than 1:4 or more than 4:1 between sulphate and sulphonate in the multi-component particulates or in the binding agent;

- the mandatory presence in the first multi-component particulate of sulphonate and water-insoluble builder material at an amount ratio of less than 1:6 or more than 6:1,

as well as

- the mandatory presence in the second multi-component particulate of sulphate and inorganic salt at an amount ratio of less than 1:5 or more than 5:1.

Finally, the claim imposes also an amount ratio between the optional polymer builder material and any anionic surfactant, in case these ingredients are both present in the same multi-component particulate or in the binding agent.

The Board considers it appropriate to stress that the wording of claim 1 can only be interpreted as also implicitly allowing for sulphate and sulphonate to be present in totally distinct phases within the non-homogeneous granule (i.e. not simultaneously present in any multi-component particulate or in the binding agent). This is evident in view of the definition of the preferred embodiment of the invention given in claim 2 of the same request.

- 1.2 Paragraphs [0001] to [0008] of the published patent describe the background and the advantages of the invention (see in particular paragraphs [0003] to [0005] reading, *inter alia*,:" [0003] ... it has been found that when the number of granular components of a composition is reduced and that thus for example various detergent

components are incorporated in the same granule, an improved uniform dosage to the wash is obtained.

[0004] However, the inventors have found that certain detergent ingredients ... can cause problems when mixed together in the same granule. They found in particular that the product tends to gel and leave fabric and machine residues when generally used detergent actives are mixed together to form a granule or tablet.

[0005] They found surprisingly that this occurs in particular when anionic sulphate surfactant and anionic sulphonate surfactants are formulated together. Granules containing mixtures of these surfactants tend to form gels which do not dispense or dissolve well."

From their content the Board concludes that the technical problem addressed by the inventors was to avoid the problems of dissolution of the **homogeneous** detergent granular compositions of the prior art (in which the different ingredients, and in particular sulphate and sulphonate, were intimately mixed within each homogeneous granule) while maintaining the advantageous uniformity of dimension, composition and appearance already obtained in the homogeneous detergent granular compositions of the prior art.

The Board stresses that this conclusion is consistent with the definition of the technical problem addressed by the invention that has been given by the Appellant in the grounds of appeal (see above section VI of the Facts and Submissions).

- 1.3 The Board notes that substantially the same technical problem has already been addressed in document (4), as evident e.g. in view of the disclosure given therein at column 1, line 60 to column 2, line 1, reading, *inter*

alia: "... compact detergent compositions having high levels of anionics tend to form a sticky gel phase upon contact with the laundering solution, a feature which exacerbates the solubility problem", or at column 3, lines 61 to column 4, line 8, where it is implicitly acknowledged that the gist of this prior art was to specifically avoid the undesirable gelling and caking upon exposure to the laundering solution that is due to the intimate mixing of sulphates and sulphonates in the detergent composition.

Moreover, the Board considers self-evident that the granular detergent compositions of document (4) also possess dosage uniformity (in the sense of the patent in suit), since they are obtained in the single mixing/densifying step described in Example 1 from the same plurality of distinct ingredient streams for sulphonate, sulphate, water-insoluble builder material and inorganic salt and, thus, each non-homogeneous granule produced may be expected to comprise all these ingredients.

Finally, since the non-homogenous granules of example 1 of document (4) necessarily comprise each of the above ingredients in a distinct single-component phase within each granule, it is also apparent to the Board that the subject-matter of claim 1 only differs from this prior art for the mandatory presence of the first and second multi-components particulates with the specified ingredient ratios.

Hence, the Board has no reason to depart from the finding of the Opposition Division, undisputed by the Appellant, that document (4), and, in particular,

example 1 therein, represents a suitable starting point for the assessment of inventive step.

- 1.4 The Appellant, although acknowledging the similarity between the problem addressed in the patent in suit and that addressed in document (4), has considered that the subject-matter claimed does not represent just an alternative to the prior art, but solves a technical problem that is different from that already solved in document (4). The Appellant has submitted that the advantages resulting from the ratio ranges characterizing the claimed subject-matter - and, thus, undisclosed in the prior art - would be substantiated by the description at page 1, lines 27 to 30, page 3, lines 5 to 6, page 11, lines 20 to 33, and page 12, lines 1 to 34. Even though the Appellant has not indicated if these pages and lines were those of the published patent or those of the published patent application, it is apparent to the Board that they can only reasonably have been used to indicate passages in the patent **application**.

The Board notes preliminarily that the Respondent has disputed the relevance of the cited passages as being just vague allegations, unsuitable for supporting any credible and clearly identifiable technical advantage possibly resulting from the features characterizing the claimed subject-matter vis-à-vis the prior art. However, it has turned out unnecessary to further investigate the credibility of these statements in the patent's description, because it has appeared immediately evident to the Board that, even in the hypothetical case that they could be regarded as something more than just vague allegations, still the

disclosure provided therein would in no case represent a reason for expecting any technical advantage of the claimed granules vis-à-vis the prior art.

Indeed, the sentence at page 1, lines 27 to 30, of the published patent application (the corresponding passage is in paragraph [0003] of the published patent) only identifies the technical advantages of uniformity (already present even in the prior art homogenous granules) that are due to the presence of several ingredients in the same granule. However, as already discussed above, it is apparent that the same uniformity present in the non-homogenous granules of the invention is also displayed by those produced in example 1 of document (4).

The other cited passage of the patent application at page 3, lines 5 to 6, page 11, lines 20 to 33, and page 12, lines 1 to 34, (whose corresponding passages in the published patent are in paragraphs [0011] and [0057] to [0065]) refer to the dissolution and dispensing advantages possibly deriving from the ingredient ratios defined in claim 1. However, it remains the fact that the patent application (as well as the granted patent) explicitly discloses as **particularly preferred in view of these advantages** the granules wherein the particulates

a) do **not** simultaneously contain sulphonate and sulphate (see page 3, lines 1 to 4, of the application, and the corresponding passage in paragraph [0010] of the patent),

b) do **not** simultaneously contain sulphate and inorganic salt (see page 11, lines 27 to 29, of the application, and the corresponding passage in paragraph [0057] of the patent)

and

c) do **not** simultaneously contain sulphonate and water-insoluble builder material (see page 12, lines 13 to 15, of the application, and the corresponding passage in paragraph [0060] of the patent).

Hence, and since the granules of example 1 of document (4) contain in their interior each of these ingredients in a different phase, the Board concurs with the Respondent that the prior art fulfils all exclusions "a)" to "c)" described in the patent in suit as the **preferred** measures for the achievement of the desired dissolution and dispensing properties.

The Board finds the relevance of these teachings not affected by the fact that the exclusions "b)" and "c)" are no longer possible in the now claimed granules (because claim 1 now requires the mandatory presence of the two multi-component particulates).

Accordingly, the very same disclosure of the patent in suit, that, in the opinion of the Appellant, would substantiate the alleged advantages of the claimed subject-matter, also (equally credibly) substantiate the conclusion that any technical advantage in dissolution and dispensing possibly displayed by the now claimed granules must also be possessed at the same

(or an even better) level by the granules of example 1 of document (4).

Already for this reason the Board finds unconvincing the Appellant's allegation as to the existence of differences between, on the one side, the solubility properties and dosage uniformity aimed at and achieved by the claimed subject-matter, and, on the other side, those aimed at and already achieved by the non-homogeneous granules of example 1 of document (4).

Thus, the Board concludes that the technical problem credibly solved by the subject-matter claimed is the same already solved in the prior art and, thus, that the claimed granules and tablets represent nothing more than an alternative to the granules obtained in example 1 of document (4).

- 1.5 The Appellant has attempted to argue that the skilled person starting from document (4) would actually be led away from formulating granules as those claimed, because this citation would suggest at column 6, line 27, the use of sulphate and sulphonate at a weight ratio of 1:4 to 4:1. However, this statement is found manifestly deprived of any credibility since the passage in document (4) referred to by the Appellant only gives the amount ratio of these two ingredients **in the whole granule**. Instead, claim 1 of the present patent only limits the weight ratio of sulphonate and sulphate **that are simultaneously present in the same particulate** or in the same binding agent within each granule, i.e. present claim 1 does not impose any limitation as to the amount ratio between these ingredients throughout the whole granule.

1.6 The Board notes the undisputable fact that, as extensively discussed by the Respondent already in its written reply to the grounds of appeal, the examples in document (5) and (7) disclose non-homogeneous detergent granules made from multi-component particulates whose ingredients are present at the same or at about the same amount ratios as those defined in claim 1 under consideration.

Hence, the Board finds that the skilled person, starting from the prior art of example 1 of document (4), and aiming at alternative ways to put into practice the technical teaching of this citation (i.e. to avoid intimate mixing of sulphate and sulphonate) would arrive at the subject-matter of present claim 1 without exercising any inventive ingenuity, by just arbitrarily selecting among the other particulate streams that have already been used for producing non-homogeneous detergent granules in which sulphate and sulphonate are present in distinct phases within the granules, the multi-component particulates used in the examples of document (5), or of document (7) or slight modifications thereof.

1.7 The Appellant has also argued that, in case the Board found that the objective technical problem solved consisted in the provision of an alternative, the claimed invention was still inventive over document (4) because this latter gives no motivation to the skilled person to include water-insoluble builder materials and inorganic salts into the surfactant ingredients in the manner required by claim 1; therefore, while the skilled person could make such a selection it was

unfounded to state that he would. It referred to the Case Law of the Boards of Appeal such as T 2/83, T 9/84 and T 7/86 that would substantiate that even if a skilled man could (rather than would) make a selection, this did not render that selection obvious.

The Board finds that the cited Case Law (whereby the decision indicated as "T9/84" appears to be that of case T 90/84) only addresses situations in which the skilled person is expecting some improvement or advantage by means of the selection (see point 7 of the reasons in T 2/83; point 9 in T 90/84 and point 6.6 in T 7/86). Therefore, these decisions are not applicable to the present case relating to the provision of an alternative only.

The Board considers instead relevant in the present case the established Case Law that, **when the technical problem is simply that of providing a further composition of matter or a further method, i.e. simply that of providing an alternative to the prior art**, any feature or combination of features already conventional for that sort of composition of matter or method represents **an equally suggested or obvious solution** to the posed problem. Indeed, the Boards have repeatedly established that the simple act of arbitrarily selecting one among equally obvious alternative variations is deprived of any inventive character (see e.g. T 939/92 of 12 September 1995, OJ EPO 1996, 309, No. 2.5.3 of the reasons, or T 311/95, unpublished, No. 2.5.7 of the reasons).

Hence, even if the skilled person "could" also have taken into consideration other conventional

modifications of the prior art, the existence of such other obvious solutions does not render inventive the one leading to the presently claimed subject-matter.

- 1.8 Thus, the Board concludes that the subject-matter of claim 1 of the sole request of the Appellant does not involve an inventive step vis-à-vis the prior art. Hence, this request is found not allowable in view of Article 56 EPC 1973.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

D. Magliano

L. Li Voti