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**Datasheet for the decision  
of 27 February 2015**

**Case Number:** T 2165/12 - 3.3.06

**Application Number:** 99949919.7

**Publication Number:** 1115837

**IPC:** C11D17/06, C11D11/00

**Language of the proceedings:** EN

**Title of invention:**

GRANULAR DETERGENT COMPOSITIONS HAVING HOMOGENOUS PARTICLES  
AND PROCESS FOR PRODUCING SAME

**Patent Proprietor:**

THE PROCTER & GAMBLE COMPANY

**Opponent:**

Henkel AG & Co. KGaA

**Headword:**

Granular detergent composition/P&G

**Relevant legal provisions:**

EPC Art. 107, 123(2), 108, 123(2)  
EPC R. 99(2), 101(1)

**Keyword:**

Admissibility of appeal - (yes)  
Late-filed requests filed with statement of grounds -  
admitted (yes)  
Amendments - extension beyond the content of the application  
as filed (yes) - all requests

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
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Case Number: T 2165/12 - 3.3.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.06**  
**of 27 February 2015**

**Appellant:**  
(Patent Proprietor)

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**Representative:**

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted on 2 August 2012  
revoking European patent No. 1115837 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** B. Czech  
**Members:** G. Santavicca  
J. Geschwind

## Summary of Facts and Submissions

- I. The appeal lies from the decision of the Opposition Division to revoke European patent No. 1 115 837.
- II. Claims 1 and 12 of the patent as granted read as follows (amendments made to the corresponding claims of the application as filed made apparent by the Board):

"1. A granular detergent compositions [sic] having a homogeneity number,  $HN$ , as defined by the equation:

$$HN = X_{bulk}/X_{part}$$

where  $X_{bulk}$  is the ratio of the concentration of a selected detergent ingredient in the particle with the lowest level of said ingredient to the concentration of said ingredient in the particle with the highest level of said ingredient and  $X_{part}$  is the ratio of the concentration of a discrete area of a particle with the lowest level of said ingredient to the concentration of the discrete area of the same particle with the highest level of said ingredient, of ~~less than about 0.5 or~~ greater than 1, wherein said selected detergent ingredient is a  $C_{11-18}$  alkyl benzene sulfonate."

"~~13~~ 12. A process for producing a granular detergent composition **according to claim 1** comprising the steps of providing a feed stream of detergent particles having at least one detergent active therein, said detergent particles being selected from at least two of the group consisting of spray-dried granules, wet agglomerates, dry-agglomerates, detergent adjunct ingredients and mixtures thereof, passing said feed stream through at least one mixer selected from high speed, moderate speed, low speed, and low shear mixers to produce a detergent composition having a homogeneity number,  $HN$ , defined by the equation:

$$HN = X_{bulk}/X_{part}$$

where  $X_{bulk}$  is the ratio of the concentration of a selected detergent ingredient in the particle with the lowest non-zero level of said ingredient to the concentration of said ingredient in the particle with the highest level of said ingredient and  $X_{part}$  is the ratio of the concentration of a discrete area of a particle with the lowest level of said ingredient to the concentration of the discrete area of the same particle with the highest level of said ingredient, of ~~less than about 0.5 or greater than 1.~~"

- III. The patent in suit had been opposed in its entirety on the grounds of Articles 100(a), (b) and (c) EPC.
- IV. In the decision under appeal, the Opposition Division concluded *inter alia* that Claim 1 as granted found basis in the application as filed and that the ground for opposition under Article 100(c) EPC did not prejudice maintenance of the patent. The patent was, however, revoked for lack of novelty over one of the cited prior art documents ("D4").
- V. With its statement setting out the grounds of appeal dated 10 December 2012, the Appellant (Patent Proprietor) filed five sets of amended claims as Main Request and First to Fourth Auxiliary Requests. The Appellant submitted that the claimed subject-matter was novel and requested remittal of the case for the consideration of inventive step.

Claim 1 according to the **Main Request** differs from Claim 1 as granted (see II, *supra*), in that it comprises the following appended features:  
", wherein at least 50% by weight of particles have a geometric mean particle diameter of from 400 microns to

*1500 microns with a geometric standard deviation of from 1 to 2, wherein at least a portion of said particles contain a deterative surfactant and a detergent builder."*

Claim 1 according to the **First Auxiliary Request** differs from Claim 1 according to the Main Request in that it reads (amendments made apparent by the Board):  
"... with a geometric standard deviation of from ~~1 to 2~~ 1.0 to **1.7**, ...".

Claim 1 according to the **Second Auxiliary Request** differs from Claim 1 according to the Main Request in that it reads:  
"... with a geometric standard deviation of from ~~1 to 2~~ 1.0 to **1.4**, ...".

Claim 1 according to the **Third Auxiliary Request** differs from Claim 1 according to the Main Request in that it reads:  
"... with a geometric standard deviation of from ~~1 to 2~~ 1.0 to **1.2**, ...".

Independent process Claim 1 according to the **Fourth Auxiliary Request** differs from independent process Claim 12 as granted (Point II, supra ) and reads as follows (amendments made apparent by the Board):

**"1. ~~12.~~ A process for producing a granular detergent composition according to claim 1, wherein the granular detergent composition has a homogeneity number, HN, as defined by the equation:**

$$HN = X_{bulk}/X_{part}$$

**where  $X_{bulk}$  is the ratio of the concentration of a selected detergent ingredient in the particle with the lowest level of said ingredient to the concentration of**

*said ingredient in the particle with the highest level of said ingredient and  $X_{part}$  is the ratio of the concentration of a discrete area of a particle with the lowest level of said ingredient to the concentration of the discrete area of the same particle with the highest level of said ingredient, of greater than 1, wherein said selected detergent ingredient is a  $C_{11-18}$  alkyl benzene sulfonate, wherein the process ~~comprising~~ **comprises** the steps of providing a feed stream of detergent particles having at least one detergent active therein, said detergent particles being selected from at least two of the group consisting of spray-dried granules, wet agglomerates, dry-agglomerates, detergent adjunct ingredients and mixtures thereof, passing said feed stream through at least one mixer selected from high speed, moderate speed, low speed, and low shear mixers to produce a detergent composition having a homogeneity number, HN, defined by the equation:*

$$HN=X_{bulk}/X_{part}$$

*where  $X_{bulk}$  is the ratio of the concentration of a selected detergent ingredient in the particle with the lowest non-zero level of said ingredient to the concentration of said ingredient in the particle with the highest level of said ingredient and  $X_{part}$  is the ratio of the concentration of a discrete area of a particle with the lowest level of said ingredient to the concentration of the discrete area of the same particle with the highest level of said ingredient, of ~~less than about 0.5 or~~ greater than 1, **wherein said feed stream comprises spray-dried granules and dry detergent agglomerates**".*

- VI. In its response to the statement setting out the grounds of appeal, the Respondent submitted that the appeal was not sufficiently substantiated and hence

inadmissible. Moreover, the claims according to the requests of the Appellant were not allowable, *inter alia* because they did not meet the requirements of Article 123(2) EPC.

- VII. In a further letter dated 26 January 2015, the Respondent submitted additionally that the Appellant was manifestly not adversely affected (107 EPC). Moreover, the Appellant's claim requests were all late filed and should not be admitted into the proceedings pursuant to Article 12(4) RPBA.
- VIII. By letter dated 2 February 2015, the Appellant withdrew its request for oral proceedings and requested that a written decision be issued. It also announced that it would not attend the oral proceedings.
- IX. Oral proceedings were held on 27 February 2015, in the absence of the Appellant (Rule 115(2) EPC).
- X. The Appellant requested in writing that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the claims according to the Main Request or one of the First to Fourth Auxiliary Requests submitted with the statement setting out the grounds of appeal.

The Respondent requested that the appeal be rejected as inadmissible or be dismissed.

- XI. The arguments of the Appellant of relevance here can be summarised as follows:

The amended independent claims resulted from the combinations of granted claims. The subject-matter of the amended claims was novel over document D4.



XII. The arguments of the Respondent of relevance here can be summarised as follows:

Referring to case law of the boards of appeal, the Appellant submitted that the statement did not set out the legal and factual reasons for which the decision to revoke the patent was wrong. The Appellant had merely filed new amended claim requests, without defending the patent as granted. The appellant was thus not adversely affected (Article 107 EPC) and the appeal was thus not sufficiently substantiated (Rule 99(2) EPC). Therefore, the appeal was not admissible (Article 108 EPC).

The Appellant had not explained why it had not filed the new claim requests before the Opposition Division, especially in view of its decision not to attend the oral proceedings. Furthermore, if the new claim requests were admissible, the Respondent would be disadvantaged thereby, especially if a remittal became expedient. Still further, the Appellant's intention to proceed with new claim requests, possibly to obtain a remittal to the first instance, amounted to an abuse of the proceedings, and ran contrary to the principle of procedural economy.

Finally, the filing of the new auxiliary claim requests, wherein the first three requests dealt with product claims, whilst the fourth dealt with process claims, was a non-convergent approach not complying with the principle of procedural efficiency.

## **Reasons for the Decision**

### *Admissibility of the appeal*

1. Since the patent in suit was revoked by the Opposition Division, the Patent Proprietor is adversely affected by the decision under appeal (Article 107 EPC).

1.1 The Board observes that although the Opposition Division had provisionally opined that the subject-matter of Claims 1 and 12 as granted was novel over *inter alia* D4, it later revoked the patent for lack of novelty over D4 at the oral proceedings held in the absence of the Patent Proprietor.

1.2 In its statement of grounds, the Appellant set out why it considered that the claims according to its newly filed requests overcame the novelty objection based on D4, i.e. why the reasons for the revocation of the patent no longer applied.

The Appellant thus indicated "reasons for setting aside the impugned decision" as well as "the extent to which it is to be amended". The Board is thus satisfied that under the circumstances of the present case, the requirements of Rule 99(2) EPC are met.

1.3 Therefore, the appeal is admissible (Article 108 EPC).

### *Admissibility of the Main Request*

2. The Appellant only became aware of the detailed reasons for which the patent was (somewhat surprisingly) revoked, i.e. lack of novelty over D4, upon receipt of the written decision of the Opposition Division.

2.1 In the present case, the Patent Proprietor could, in principle, already have filed such requests as a fallback position during the opposition procedure, but considering the positive opinion expressed in the communication of the Opposition Division it chose not to do so.

In the Board's judgement, this behaviour does not, under the circumstances of the case, amount to an abuse of the procedure.

2.2 The Board also took into consideration that the new claim requests are based on combinations of the claims as granted, that they contribute to the convergence of the debate ("*HN*" value progressively restricted; or restriction to the process for producing the product of the invention), that their filing does not run counter the principle of procedural economy and efficiency, and that they do not appear to manifestly disadvantage the Respondent.

2.3 Therefore, taking into account all the circumstances of the case, the Board decided to admit the new Main Request and the new First to Fourth Auxiliary Requests into the proceedings, despite their late filing (Article 114(2) EPC and Article 12(4) EPC).

*Main Request - Allowability of the amendments*

3. Claim 1 according to the Main Request and comprises, compared to Claim 1 as originally filed, the following additional features (emphasis added):  
i) "*wherein said selected detergent ingredient is a C<sub>11-18</sub> alkyl benzene sulfonate*" (compounds mentioned in the description of the application as filed; and,

ii) *"wherein at least 50% by weight of particles have a geometric mean particle diameter of from 400 microns to 1500 microns with a geometric standard deviation of from 1 to 2, wherein at least a portion of said particles contain a **deterstive surfactant** and a **detergent builder**"* (features of claim 4 of the application as filed).

- 3.1 According to the wording of Claim 1 at issue, the granular composition must contain *"deterstive surfactant"* and detergent builder (see ii), *supra*), but said *"deterstive surfactant"* component does not necessarily consist of C<sub>11-18</sub> alkyl benzene sulfonate only. However, the homogeneity number ("HN") of the claimed granular detergent composition as defined in Claim 1 is calculated considering, as *"selected detergent ingredient"*, only C<sub>11-18</sub> alkyl benzene sulfonate.
- 3.2 According to the Respondent, the so amended wording was objectionable under Article 123(2) EPC. Thus it has to be assessed whether the application as filed discloses that the *"selected ingredient"* to be considered in determining "HN" may also be a specific component (e.g. *"C<sub>11-18</sub> alkyl benzene sulfonate"*) of the *"selected detergent ingredient"* (e.g. *"deterstive surfactant"*), which may be a mixture.
- 3.3 In this respect, the following parts of the application as filed are of relevance (emphasis added):
- (a) Claim 1, according to which "HN" is calculated from the defined concentrations of *"a selected detergent ingredient"*;
  - (b) Claim 2 and Page 3, lines 19-20, according to which *"the selected detergent ingredient is **surfactant** "*;

- (c) Page 6, lines 3-4 and 20-21, according to which, respectively, " $X_{bulk}$  is the ratio of the concentration of a **selected detergent ingredient** such as **surfactant**, builder, polymer, etc. in particulate component" and " $X_{part}$  is the ratio of the concentration of a **selected detergent ingredient** such as surfactant, builder, etc, across domains within the same particle";
- (d) Page 15, lines 10-11, according to which "the surfactant system of the detergent composition may include **anionic**, nonionic, zwitterionic, ampholytic and cationic classes and compatible mixtures thereof";
- (e) Page 15, lines 18-20, according to which "non limiting examples of surfactant systems include the conventional  $C_{11-18}$  alkyl benzene sulfonate";
- (f) Page 16, lines 7-8, according to which "**mixtures of anionic** and nonionic **surfactants** are especially useful";
- (g) Page 2, lines 3-11, according to which "the cause of the aforementioned dissolution problem is associated with the 'bridging' of a 'gel-like' substance between **surfactant-containing particles** to form undesirable 'clumps'. The gel-like substance responsible for the undesirable 'bridging' of particles into 'clumps' originates from the partial dissolution of **surfactant** in the aqueous laundering solutions, wherein such partial dissolution causes the formation of a highly **viscous surfactant phase or paste** which binds or otherwise 'bridges' other **surfactant-containing particles** into 'clumps'. ... In addition to the viscous surfactant bridging effect, ..."
- (h) Page 7, lines 20-22, according to which "by concentrating **certain ingredients** and/or selectively separating them, one can prevent the

*gelling upon dissolution due to chemical interactions between the particles";*

- (i) Examples I to III, according to which the "surfactant active" concentration is used for the calculation of HN.

3.3.2 For the Board, it emanates from these parts of the application as filed that the drawbacks which the application addresses, and the solution thereto as proposed, relate to the presence and behavior of the **surfactant** (in general) components, i.e. the total surfactant ingredient, of the particles, thus that the parameter to be controlled is the total concentration of **surfactant** (as "selected detergent ingredient") in the granular composition.

3.3.3 Still according to the application as filed, the term "surfactant" includes conventional classes of anionic, nonionic, cationic, amphoteric and zwitterionic surfactants.

Although, among the anionics, the conventional C<sub>11-18</sub> alkyl benzene sulfonates are specifically mentioned in the application as filed, there is no disclosure therein that this is the only class supposed to make up the detergent ingredient "surfactant", or that only this particular class of anionics was responsible for the drawbacks to be overcome, let alone that the control of this class only was sufficient to overcome the known drawbacks.

More particularly, there is no instance in the application as filed, from which it can be gathered, explicitly or implicitly, that even when several surfactant components/actives are present in the surfactant system, only C<sub>11-18</sub> alkyl benzene sulfonate

as referred to in Claim 1 is critical and should be considered in determining the homogeneity number HN.

- 3.4 Hence, Claim 1 is directed to subject-matter extending beyond the content of the application as filed insofar as it is also directed to defines granular detergent compositions which
- comprise a "*detergative surfactant component*" which, although comprising C<sub>11-18</sub> alkyl benzene sulfonate(s), need not consist (only) of these specific surfactant(s) and
  - meet the condition  $NH > 1$  based on the consideration of C<sub>11-18</sub> alkyl benzene sulfonate only (as the "*selected detergent ingredient*").

- 3.5 Since the whole subject-matter of Claim 1 cannot be directly and unambiguously derived from the contents of the application as filed, including its implicit disclosure, Claim 1 at issue does not meet the requirements of Article 123(2) EPC.

*First to Third Auxiliary Requests*

4. The respective Claim 1 of each of the First to Third Auxiliary Requests are narrower in scope than Claim 1 of the Main Request in that they comprise a narrower definition of the numerical range defined for the "*geometric standard deviation*".
- 4.1 However, the further narrowing of the scope of this particular feature has no bearing on the considerations under 3.1 et seq., *supra*, which thus apply *mutatis mutandis* to the respective Claim 1 of each of the requests at issue.
- 4.2 Hence, these claims do not meet the requirements of

Article 123(2) EPC either.

*Fourth Auxiliary Request*

5. Claim 1 according to the Fourth Auxiliary Request concerns a process for producing a granular detergent composition (Point V, *supra*). Claim 1 is essentially a combination of Claims 12 and 13 as granted, wherein the previous reference "*according to Claim 1*" is replaced by the actual wording of claim as granted.
- 5.1 According to this claim, the granular detergent composition to be produced is also defined by the criterion  $HN > 1$  to be met by C<sub>11-18</sub> alkyl benzene sulfonate(s) as "*selected detergent ingredient*", although it is directed to the use of "*a feed stream of detergent particles having **at least one detergent active** therein*" (emphasis added).
- 5.2 Claim 1 at issue is thus also directed to processes wherein several detergent surfactant actives, including but not restricted to C<sub>11-18</sub> alkyl benzene sulfonate(s) only, are present in the granular detergent composition. However, the condition  $HN > 1$  need be met only as regards the C<sub>11-18</sub> alkyl benzene sulfonate(s).
- 5.3 Claim 1 is thus (also) directed to producing compositions which, although not being limited to (only) C<sub>11-18</sub> alkyl benzene sulfonate(s) as deterative surfactant ingredient, must only meet the  $HN > 1$  criterion in respect of the latter. The production of such composition is, however, not even implicitly disclosed in the application as filed.
- 5.4 Since Claim 1 at issue is directed to subject-matter extending beyond the content of the application as



filed, it does not meet the requirements of Article  
123(2) EPC.

*Conclusion*

6. None of the Appellant's claims requests is allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



D. Magliano

B. Czech

Decision electronically authenticated