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**Datasheet for the decision  
of 3 December 2008**

**Case Number:** T 0528/06 - 3.3.06

**Application Number:** 92310721.3

**Publication Number:** 0544492

**IPC:** C11D 17/06

**Language of the proceedings:** EN

**Title of invention:**  
Particulate detergent compositions

**Patentee:**  
Unilever PLC, et al

**Opponent:**  
Henkel AG & Co. KGaA  
The Procter & Gamble Company

**Headword:**  
Detergent/UNILEVER

**Relevant legal provisions:**  
EPC Art. 84  
EPC R. 43(1)

**Relevant legal provisions (EPC 1973):**

-

**Keyword:**  
"Clarity: no (all requests) - contradiction between independent claims"

**Decisions cited:**

-

**Catchword:**

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Case Number: T 0528/06 - 3.3.06

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.06  
of 3 December 2008

**Appellant:** Henkel AG & Co. KGaA  
(Opponent) VTP Patente  
D-40191 Düsseldorf (DE)

**Representative:** -

**Party as of right:** The Procter & Gamble Company  
(Opponent) One Procter & Gamble Plaza  
Cincinnati  
Ohio 45202 (US)

**Representative:** Samuels, Lucy Alice  
Gill Jennings & Every LLP  
Broadgate House  
7 Eldon Street  
London EC2M 7LH (GB)

**Respondents:** Unilever PLC  
(Patent Proprietors) Unilever House  
Blackfriars  
London  
Greater London EC4P 4BQ (GB)

and

Unilever N.V.  
Weena 455  
NL-3013 AL Rotterdam (NL)

**Representative:** Rosen Jacobson, Frans Lucas M.  
Unilever N.V.  
Patent Group  
P.O. Box 137  
NL-3130 AC Vlaardingen (NL)

**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
27 February 2006 concerning maintenance of  
European patent No. 0544492 in amended form.

**Composition of the Board:**

**Chairman:** P.-P. Bracke  
**Members:** G. Dischinger-Höppler  
U. Tronser

## Summary of Facts and Submissions

I. European patent No. 0 544 492 was granted on the basis of 14 claims containing two independent claims which read:

"1. A particulate detergent composition having a bulk density of at least 650 g/l, characterised in that it comprises:

(a) from 15 to 50 wt% of a surfactant system consisting essentially of:

(i) 60 to 100 wt% of ethoxylated nonionic surfactant which is a primary C<sub>8</sub>-C<sub>18</sub> alcohol having an average degree of ethoxylation not exceeding 6.5 based on the total weight of the surfactant system,

(ii) 0 to 40 wt% of primary C<sub>8</sub>-C<sub>18</sub> alkyl sulphate based on the total weight of the surfactant system;

(b) from 20 to 60 wt% of zeolite;

(c) optionally other detergent ingredients to 100 wt%;

the composition being prepared by a wholly non-tower route by granulating the zeolite and surfactants in a high speed mixer/granulator.

12. A process for the preparation of a particulate detergent composition as claimed in claim 1, characterised in that it comprises mixing and granulating the zeolite, ethoxylated alcohol, the

primary alkyl sulphate (if present) in acid or salt form, and optionally other compatible ingredients, in a high-speed mixer/granulator."

- II. Two notices of opposition had been filed against the granted patent upon which the Opposition Division decided to revoke the patent on the grounds of Articles 123(2) and (3) EPC. The Patent Proprietors filed an appeal against this decision. The appeal was based on an amended Claim 1 which differed from that of the granted version in that the amounts in sections (i) and (ii) have been changed from 60 to 100 wt% to 60 to 95 wt% and from 0 to 40 wt% to 5 to 40 wt%, respectively. The Board of Appeal decided in T 397/01 that this amendment was admissible under the provisos of Articles 84 and 123(2)(3) EPC and remitted the case to the first instance for further prosecution.
- III. This resulted in the interlocutory decision of the Opposition Division from which the present appeal is lying concerning maintenance of the patent in amended form on the basis of the then pending fourth auxiliary request. The higher ranking requests were rejected on the grounds of Articles 83 EPC and 123(2) EPC, respectively.
- IV. This decision was appealed by Opponent I (hereinafter Appellant). Opponent II filed observations as party as of right. The Patent Proprietors (hereinafter Respondents) filed amended sets of claims in three auxiliary requests.
- V. Upon requests by the parties, oral proceedings before the Board of Appeal were held on 3 December 2008, in the absence of the Appellant as announced in a letter

received on 21 October 2008. In the beginning of the oral proceedings, the Respondents replaced all the claims sets by new versions wherein the only amendment consisted in that in Claim 1 the upper limit of the amount of sodium carbonate has been reduced from 60 wt% to 40 wt%.

The independent claims of the main request read:

"1. A particulate detergent composition having a bulk density of at least 650 g/l, characterised in that it comprises:

- (a) from 15 to 50 wt% of a surfactant system consisting essentially of:
  - (i) 60 to 95 wt% of ethoxylated nonionic surfactant which is a primary C<sub>8</sub>-C<sub>18</sub> alcohol having an average degree of ethoxylation not exceeding 6.5 based upon the total weight of the surfactant system, and
  - (ii) 5 to 40 wt% of primary C<sub>8</sub>-C<sub>18</sub> alkyl sulphate based upon the total weight of the surfactant system;
- (b) from 25 to 48 wt% of zeolite,
- (c) from 1 to 5 wt% of fatty acid soap,
- (d) from 1 to 40 wt% of sodium carbonate,
- (e) optionally other detergent ingredients to 100 wt%; the composition being prepared by a wholly non-

tower route by granulating the zeolite, surfactants and a fatty acid and an alkali or a fatty acid soap in a high speed mixer/granulator.

9. A process for the preparation of a particulate detergent composition as claimed in claim 1, characterised in that it comprises

(i) preparing a surfactant system comprising the ethoxylated alcohol and the primary alkyl sulphate in acid or salt form in the form of a homogeneous liquid blend, which also comprises the fatty acid and the alkali, or the fatty acid soap, and

(ii) agglomerating the homogeneous liquid surfactant blend with the zeolite and optionally other compatible ingredients in the high-speed mixer/granulator."

The first auxiliary request differs from the main request only in that in part (i) of Claim 9 the term "surfactant system comprising" has been replaced by "surfactant system consisting essentially of" and in part (ii) of Claim 9 the term "and optionally other compatible ingredients" has been replaced by "and other solids present".

The second auxiliary request differs from the main request in the same way as the third auxiliary request from the first auxiliary request, namely only in that in Claim 1 the term "by granulating the zeolite, surfactants and a fatty acid and an alkali or a fatty acid soap in a high speed mixer/granulator" has been replaced by "by preparing the surfactant system in the form of a homogeneous liquid blend, incorporating a

fatty acid and an alkali or a fatty acid soap into the homogeneous liquid blend and granulating the zeolite and the surfactant system in a high speed mixer/granulator".

- VI. The Appellant and the party as of right submitted inter alia that the amendments made to Claims 1 and 9 of all requests were not allowable.

It was argued that the amendments introduced non-clarity which was not present in the claims as granted since the process of Claim 9 included the step of preparing a surfactant system comprising not only the ethoxylated alcohol and the primary alkyl sulphate (PAS), but also either fatty acid and alkali or fatty acid soap. This was in contradiction with Claim 1 concerning the quantities of the ingredients. In particular, the surfactant system thus produced could not contain 95 wt% of the ethoxylated alcohol in addition to the minimum amount of 5 wt% of the PAS as required in accordance with Claim 1.

- VII. The Respondents refuted this argument and submitted that the soap was present in the composition as a structurant rather than as a surfactant and that the total amount of soap was part of the other detergent ingredients mentioned in part e) of Claim 1. Further, it followed from the fact that according to part a) of Claim 1 the surfactant system consisted essentially of the ethoxylated alcohol and the PAS, no soap could be present in the surfactant system in amounts of up to 5 wt%.



VIII. The Appellant, in writing, and the party as of right requested that the patent be revoked.

The Respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of the main request or one of the auxiliary requests 1 to 3, all requests submitted during oral proceedings.

### **Reasons for the Decision**

#### 1. *Amendments of the claims and Article 84 EPC*

In order to ensure that the public is not left in any doubt as to which subject-matter is covered by a particular patent and which is not, Article 84 EPC in combination with Rule 43(1) EPC requires that the claims shall be clear and define the matter for which protection is sought in terms of the technical features of the invention. A claim does not, therefore, fulfil the requirement of clarity if there is doubt as to the subject-matter it may cover (see case Law of the Boards of Appeal, 5th edition 2006, II.B.).

#### 2. Main Request

2.1 In the present case, the patent contains an independent product Claim 1 relating to a composition comprising amongst other mandatory and optional components

(a) 15 to 50 wt% of a surfactant system consisting essentially of

- (i) 60 to 95 wt% of a nonionic surfactant and
- (ii) 5 to 40 wt% of PAS

and

(c) 1 to 5 wt% of fatty acid soap,

and being prepared by granulation in a granulator.

The patent also contains an independent process Claim 9 "for the preparation of a composition as claimed in claim 1" which comprises two steps, namely

(i) the preparation of a surfactant system comprising the nonionic surfactant and the PAS in the form of a homogeneous blend, which also comprises the fatty acid and the alkali, or the fatty acid soap, and

(ii) the agglomeration of the homogenous liquid surfactant blend with the other ingredients in the granulator.

2.2 Compared with the claims as granted (point I above), this situation creates in the Boards opinion non-clarity as to which subject-matter is actually covered by the patent in suit. The reasons are as follows:

By defining a process where a surfactant system is produced in the form of a homogeneous blend which comprises not only the nonionic surfactant and the PAS but also the fatty acid soap, Claim 9 is unambiguous in requiring that the soap forms part of the surfactant system.

In contrast, according to Claim 1 the soap is present in addition to the surfactant system. This is a

contradiction which results in that the actual amounts of the various ingredients become obscure.

While Claim 1 requires that the composition contains 15 to 50 wt% of the surfactant system and 1 to 5 wt% of the soap, thus leaving 45 to 84 wt% to other ingredients, Claim 9 suggests that the soap is included in the 15 to 50 wt% of the surfactant system which allows the presence of 50 to 85 wt% of other ingredients.

Moreover, it is doubtful what amounts of soap are to be added in accordance with Claim 9 if the system contains the maximum amounts covered by Claim 1 of either 95 wt% of the nonionic surfactant or 40 wt% of the PAS, since Claim 1 also requires a minimum amount of 5 wt% of PAS and 60 wt% of the nonionic surfactant, respectively.

- 2.3 While admitting that fatty acid soap is in fact an anionic surfactant, the Respondents argued that it was nevertheless apparent from the description of the patent in suit (page 7, lines 43 to 48) that the soap was present in the claimed composition as a structurant rather than as a surfactant.

The Respondents have not argued or provided evidence that the soap would not contribute as a surfactant in the claimed composition. Whether or not the soap also serves as a structurant in the claimed composition is, therefore, irrelevant and, anyway, cannot resolve the contradiction concerning the quantities of the ingredients between Claims 1 and 9 which was created by the amendments made during opposition proceedings.

Likewise, it would be irrelevant to the present clarity problem, if - as argued by the Respondents - Claim 1 defined indeed that the soap was part of the other detergent ingredients mentioned in part e) of the claim, since such a definition would also be in contradiction with the process of Claim 9. Actually, however, Claim 1 identifies the soap as one of the mandatory ingredients mentioned in parts (a) to (d), whereas the other detergent ingredients mentioned in part e) are optional. Nonetheless, the clarity problem remains the same due to the fact that according to Claim 1 the soap is mentioned separately, not as part of the surfactant system, whereas Claim 9 requires the contrary.

The Respondents also argued that it was apparent from the wording "consisting essentially of" in part (a) of Claim 1 that the surfactant system could not contain as much as 5 wt% of soap based upon the total weight of the composition.

However, the term "consisting essentially of" is vague and not defined in the specification. Nor have the Respondents argued or provided evidence to show that this term has a particular, quantitative meaning generally accepted in the present technical field of detergent compositions. Also the Board is not aware of such a particular meaning. Thus, the term can stand at best for a "major part" of the surfactant system.

Hence, the Board is of the opinion that the term "consisting essentially of" does not exclude amounts as low as 66.6 wt%, based on the surfactant system which results if the maximum possible amount of 5 wt% of soap is contained in the minimum possible amount of 15 wt%

of surfactant system, both based on the total composition.

Consequently, the above contradiction between Claims 1 and 9 is not remedied via the term "consisting essentially of" and the skilled reader of the patent in suit is still left in doubt as to which subject-matter is in fact covered and which is not.

2.4 The Board concludes, therefore, that the Respondents' main request is not allowable for lack of clarity pursuant to Article 84 EPC.

3. *Auxiliary requests*

The purpose of the amendments made to the auxiliary requests was to overcome problems under Article 123(2) EPC. They do not address or overcome the above clarity problem.

The amendments consist (see point V above)

- in the replacement of the term "comprising" in part (i) of Claim 9 by "consisting essentially of" (first and third auxiliary requests),
- in that the "optionally other compatible ingredients" in part (ii) of Claim 9 have been changed into "other solids present" (first and third auxiliary requests), and
- in that the feature concerning the preparation of a surfactant system including the soap is introduced into Claim 1 (second and third auxiliary requests).

The contradiction existing between Claims 1 and 9 of the main request (point 2.2 above) is not affected by the first two amendments, whereas the third amendment introduces it into Claim 1. Thus, in the new version of the second and third auxiliary requests, Claim 1 is even in itself contradictory concerning the question whether or not the soap forms part of the surfactant system.

Therefore, the above objection under Article 84 EPC to the main request applies mutatis mutandis to all of the three auxiliary requests.

4. Since no allowable request is on file, there is no basis for further prosecution of the present case.
  
5. The Board has not ignored that in the present case a former Board of Appeal decision has been given on the issue of Article 84 EPC. However, this decision did not concern claims requiring the presence of soap (points I and II above). Hence, the present clarity problem has not been addressed in the former Board of Appeal decision, so that the present Board is not only entitled but also actually obliged (see decision G 9/91) to assess whether the amended claims fulfil the requirements of convention, including those of Article 84 EPC.

**Order**

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

The decision under appeal is set aside.

The patent is revoked.

The Registrar:

The Chairman:

G. Rauh

P.-P. Bracke