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**D E C I S I O N**  
of 17 October 2002

**Case Number:** T 0439/98 - 3.3.6

**Application Number:** 92203563.9

**Publication Number:** 0544365

**IPC:** C11D 17/06

**Language of the proceedings:** EN

**Title of invention:**

Detergent compositions and process for preparing them.

**Patentee:**

UNILEVER N.V., et al

**Opponent:**

Henkel Kommanditgesellschaft auf Aktien

**Headword:**

Granular detergent composition/UNILEVER

**Relevant legal provisions:**

EPC Art. 114(2), 56, 113(1)

**Keyword:**

"Late filed ground of opposition - not admitted"

"Inventive step (no)"

"Substantial procedural violation (no) - new late filed ground of opposition dismissed because of lack of *prima facie* relevance without hearing opponent's arguments"

**Decisions cited:**

T 0378/97, G 0009/91, G 0010/91

**Catchword:**

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Case Number: T 0439/98 - 3.3.6

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.6**  
**of 17 October 2002**

**Appellant:** Henkel  
(Opponent) Kommanditgesellschaft auf Aktien  
TFP / Patentabteilung  
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**Representative:** -

**Respondent:** UNILEVER N.V.  
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**Representative:** Agnew, Andrew  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 21 April 1998  
rejecting the opposition filed against European  
patent No. 0 544 365 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

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

## Summary of Facts and Submissions

I. The present appeal is from the decision of the Opposition Division to reject the opposition against the European patent No. 0 449 144 relating to a process for the preparation of a granular detergent composition and to maintain the patent unamended.

Claims 1 and 10 of the granted claims read, respectively, as follows:

"1. Process for the preparation of a granular detergent composition having a bulk density of at least 650 g/l, which comprises treating a particulate starting material in a high speed mixer/densifier, characterised in that 0.1 to 50% by weight as calculated on the granular detergent composition of a liquid surfactant composition is mixed with the starting material during this treating process, said surfactant composition comprising

(a) a sodium or potassium salt of an alkyl sulphate in an amount from 5 to 60% by weight;  
(b) an alkoxyated nonionic surfactant in an amount from 40 to 95% by weight,  
(c) the balance being water in an amount from 0 to less than 20% by weight."

"10. Granular detergent composition obtainable by the process according to any of claims 1-10 and having a particle porosity of less than 10%, preferably less than 5%."

Dependent claims 2 to 9 relate to particular embodiments of the claimed process.

II. In its notice of opposition the Appellant (Opponent) sought revocation of the patent on the grounds of Article 100(a) EPC, in particular because of an alleged lack of inventive step of the claimed subject-matter, and cited *inter alia* the following documents:

(2): EP-A-0265203

(3): EP-A-0367339

Moreover, it sought to introduce during the oral proceedings held on 21 April 1998 two new grounds for opposition (lack of novelty of claim 10 and insufficient disclosure of the therein claimed invention).

III. In its decision, the Opposition Division found that the late filed new grounds for opposition had to be regarded as inadmissible because of their lack of a *prima facie* relevance.

As regards inventive step the Opposition Division found *inter alia* that, even taking into account the teaching of document (2), it was not obvious to introduce an alkyl sulphate as part of the liquid composition used in the process known from document (3) in order to solve the technical problem underlying the patent in suit.

IV. An appeal was filed against this decision.

The Appellant's arguments in regard to the patentability, submitted in writing and during the oral proceedings held before the Board on 17 October 2002, can be summarized as follows:

- since the description of the patent in suit failed to indicate any suitable method for measuring the porosity of the therein prepared granulates and the selection of a specific method therefor was essential for the reproducibility of the claimed invention, the invention of claim 10 contravened the requirements of Article 83 EPC;
- document (3), which had already solved the technical problems underlying the claimed subject-matter, disclosed a process differing from the claimed one only insofar as the liquid surfactant composition added into the high-speed mixer/densifier did not contain alkyl sulphate;
- the use in the claimed process of alkyl sulphate in the surfactant liquid composition did not bring about any additional advantage compared with a process as disclosed in document (3);
- therefore, it was obvious to use alternatively as liquid surfactant composition in the process of document (3) the sprayable liquid surfactant composition comprising alkyl sulphate disclosed in document (2).

The Appellant further submitted that the Opposition Division had dismissed the new ground for opposition relating to sufficiency of disclosure during the oral proceedings of 21 April 1998 without hearing the Appellant's arguments and had nevertheless considered the *prima facie* relevance of this ground in its written decision.

Since the Appellant had not been given the possibility of present its arguments in respect to sufficiency of disclosure during those oral proceedings the opposition division had thus contravened Article 113 EPC and had committed a procedural failure.

The objection as to the novelty of the subject-matter of claim 10 was withdrawn during oral proceedings.

V. The Respondents and Patent Proprietors argued in writing and during the oral proceedings that:

- the late filed ground for opposition should not be admitted;
- the invention of claim 10 was sufficiently disclosed;
- a skilled person would have expected that the incorporation of alkyl sulphate into a liquid surfactant composition could cause problems as regards the liquid carrying capacity and the stickiness of the produced powder; therefore he would not have combined the teachings of documents (2) and (3);
- moreover the process of document (3) related rather to a densification process wherein the nonionic liquid material was used as conditioner for the starting solid spray-dried particulate than to an agglomeration process wherein such a liquid surfactant was used as a binder as in the patent in suit;
- moreover, the process of the patent in suit led to an improved liquid carrying capacity as compared with the process of document (2) as shown in the comparative tests contained in the patent.

- VI. The Board had remarked *inter alia* in its communication of 28 February 2002 that the decision T 378/97 had already dealt with the sufficiency of a claimed invention comprising "particle porosity" as an essential feature.
- VII. The Appellant requests that the decision of the first instance be set aside and the patent be revoked. Moreover it requests a refund of the appeal fee in the case that the objection of insufficient disclosure would succeed.
- VIII. The Respondents request that the appeal be dismissed or, alternatively, that the patent be maintained on the basis of claims 1 to 9 as granted, i.e. with granted claim 10 deleted.
- IX. At the end of the oral proceedings, the chairman announced the decision of the Board.

## **Reasons for the decision**

1. *Main request*
- 1.1 Sufficiency of disclosure (claim 10)
  - 1.1.1 The opposition division refused to admit into the proceedings this ground of opposition, which was invoked by the Appellant for the first time during the oral proceedings at first instance (see points II and III above).

Since the Appellant maintained the relative objections in the statement of the grounds of appeal and during the oral proceedings before the Board (see points IV and VII above), the Board has to examine if the opposition division was right in its decision.

- 1.1.2 It is established case law of the Boards of Appeal of the EPO in accordance with the principles set out by the Enlarged Board in the cases G 9/91 (OJ EPO 1993, 408, point 16 of the reasons for the decision) and G 10/91 (OJ EPO 1993, 420, point 2 of the headnote) that the introduction of a new ground of opposition at a late stage during the opposition proceedings of first instance is only admissible in exceptional cases, for example if it is *prima facie* prejudicial to the maintenance of the patent.

There is no doubt that in the present case the ground of sufficiency of disclosure, repeated by the Appellant in its appeal statement (see points II and IV above) was filed extremely late (during the oral proceedings of 21 April 1998) and that there was no excuse for its late filing, since the granted claims had not been amended.

- 1.1.3 As it results from the written appealed decision the request to introduce the new ground of opposition was dismissed due to lack of *prima facie* relevance and in particular because "the particle porosity is a usual parameter in this field of technique and can be determined without undue burden" (see points 2.1 and 2.3).

It appears therefore that the opposition division regarded the new ground of opposition as not having at first sight any possibility of success; therefore, it exercised its power of discretion within the limits of the principles and according to the criteria defined by



the Enlarged Board of Appeal in the above mentioned cases in regard to the introduction of new grounds of opposition at a late stage of the proceedings.

- 1.1.4 Claim 10 specifies that the granular detergent composition must have a particle porosity of less than 10% without indicating any method by which the particle porosity has to be measured.

The Board finds that, in the absence of any specific indication, the claim implies that any known suitable method can be used for the determination of the particle porosity independently from the fact whether the used method would lead to a reliable result or not. The Appellant has also not disputed that methods for measuring the porosity of particles having a size usually encountered in detergent granulates, i.e. a size below 1 mm, were known to the skilled person at the priority date of the patent in suit.

Therefore, there is no doubt that the skilled person could have measured the particle porosity of the granulate of claim 10.

The Board, after having taken into account the arguments submitted by the Appellant in the statement of the grounds of appeal in regard to sufficiency of disclosure (see point IV above), finds that the Appellant's objection regards rather the scope of the value of porosity indicated in the claim, and therefore the clarity of the claim, than the possibility of reproducing the invention (see also T 378/97, unpublished in the OJ EPO, point 2.4.1 of the reasons for the decision).

Since the clarity of granted claims cannot be disputed during opposition proceedings, the Board comes to the conclusion that the late filed new ground of opposition is not a bar to the patentability of the claimed subject-matter and has thus been rightly considered inadmissible by the first instance.

1.2 Novelty

Novelty of the claimed subject-matter was not contested any longer by the Appellant during the oral proceedings held before the Board and the Board is also satisfied that the claims comply with the requirements of novelty.

No further comments on this matter are therefore necessary.

1.3 Inventive step

1.3.1 The Board accepts document (3) as the most suitable starting point for discussing inventive step as agreed by both parties.

This document deals with a process for preparing high bulk density granular detergent compositions having a bulk density of at least 650 g/l, good powder properties and a low porosity (page 2, lines 3 to 4 and page 3, lines 26 to 34).

This process involves the treatment of a particulate starting material, which can be spray-dried or dry-mixed, in a first step in a high-speed mixer/densifier for a time ranging from 5 to 30 seconds, followed by two further steps (see page 3, lines 40 to 47; page 5, lines 1 to 2). As specified on page 4, lines 51 to 52, liquids may be admixed into the high-speed mixer/densifier. Moreover, this process can

be similarly applied to a starting material consisting of dry-mixed powders, which require an agglomeration with nonionic surfactants (page 5, lines 5 to 10). The illustrative examples show that a spray-dried powder can be mixed in the high-speed mixer/densifier with other solids, water and an ethoxylated nonionic surfactant (see examples 1, 2, 7a, 7b and 8).

This results in the Board's view necessarily into an agglomerated product since the final granulate must contain all solids introduced into the mixer bound to each other and the particle size of the final granulated product depends on the process conditions and means used in the mixer.

These process steps carried out according to this document cannot thus be distinguished from those carried out in the patent in suit, the description of which, moreover, explicitly indicates the process of this document as being **suitable** for obtaining **optimal densification** of the particulate starting material (see page 5, lines 10 to 11).

Consequently, the disclosed process is not only a densification process as argued by the Respondents but also an agglomeration process and differs from that of the patent in suit only insofar as the liquid added into the high-speed mixer/densifier comprises at least 5% of alkyl sulphate beside the ethoxylated nonionic surfactant, whilst document (3) teaches only that such a surfactant may be comprised in the starting material (page 4, lines 2 and 8 to 17).

- 1.3.2 The technical problem underlying the claimed invention as defined in the text of the patent in suit was the provision of a process for the preparation of high bulk density detergent composition having a bulk density of at least 650 g/l, a high surfactant content including

alkyl sulphate and not being sticky, which process is environmentally friendly and does not require much energy (see page 2, lines 5 to 6, 38 to 41 and 49 to 54).

However, since claim 1 of the patent in suit allows the presence of only 0.1% surfactants in the final granulate and thus an amount of alkyl sulphate as low as even 0.005%, the partial problem presented in the patent in suit relating to the provision of a granulate having a high surfactants content and not being sticky does not reflect the wording of the claim and has to be disregarded.

The Respondents argued that the claimed process provided an improved liquid carrying capacity as compared with a process as described in document (2), wherein a surfactant mixture of alkyl sulphate and ethoxylated nonionic surfactant is sprayed onto an absorbent material as shown in the comparative examples of the patent in suit. This document, however, is not the suitable starting point for assessing inventive step. Therefore these tests cannot show any advantage over the process of document (3), wherein the only difference is the presence of some alkyl sulphate in the mixed liquid surfactant composition.

- 1.3.3 As already explained above, the process disclosed in document (3) already provided a process for the preparation of high bulk density detergent composition having a bulk density of at least 650 g/l, which process, having the same operative steps as that of the patent in suit, must be environmentally friendly and does not require much energy. Thus it has solved all the partial technical problems addressed and solved in the patent in suit.

The Board consequently finds that the technical problem underlying the invention must be reformulated in less ambitious terms as the provision of an alternative process of preparation of high bulk density detergent composition having a bulk density of at least 650 g/l possessing the same advantages as that of document (3).

The Board has no difficulty in this respect to find that this underlying technical problem has been solved by the process of the patent in suit.

- 1.3.4 The question to be answered in the present case for the assessment of an inventive step is therefore whether a skilled person, making use of his knowledge of the prior art when aiming at a solution of the existing technical problem, would have modified the liquid surfactant composition used in the examples of document (3) by introducing at least 5% of alkyl sulphate.

It was already known from document (2) that a mobile liquid surfactant composition comprising alkyl sulphate and ethoxylated nonionic surfactant, e.g. up to 80% of both alkyl sulphate and ethoxylated nonionic surfactants and up to 10% water, preferably 20 to 60% by weight of both surfactants and 5 to 10% by weight of water, could be prepared and was suitable for being sprayed onto a detergent base (page 2, lines 36 to 57). It was thus known that alkyl sulphate could be mixed at certain ratios with ethoxylated nonionic surfactants in order to give a mobile liquid which could be easily sprayed.

Therefore the Board finds that the skilled person would have used an alkyl sulphate in combination with an ethoxylated nonionic surfactant as a surfactant liquid composition in the process of document (3).

Moreover, there was no reason for the skilled person to expect, at least at low surfactant concentrations, an increase of the stickiness of the final product.

Therefore a skilled person would have expected that at least the liquid surfactant compositions suggested in document (2) containing a majority of the ethoxylated nonionic surfactant were suitable for the agglomeration process disclosed in document (3), would have used them alternatively to that of the specific examples of document (3) and would have expected a similar result.

Consequently, the subject-matter of claim 1 does not involve an inventive step.

2. *Auxiliary request*

Since claim 1 of this request is identical to claim 1 of the main request, this request falls for the same reasons put forward above in point 1.3.4.

3. *Refund of the appeal fee*

3.1 The Appellant contended that the opposition division had committed a substantial procedural violation because it did not hear during oral proceedings the Appellant's arguments as to insufficiency of disclosure before taking the decision not to admit the new ground of opposition.

3.2 The right to be heard, which is governed by Article 113(1) EPC, has an absolute character.

In the present case it appears from the minutes of the oral proceedings held before the first instance that the time the Appellant had to present its comments in support of its request before its dismissal was very short.

However, bearing in mind that the new ground for opposition was filed very late without any excuse for its late filing, that the opposition division, by regarding the new ground of opposition as not having at first sight any possibility of success, had exercised its discretionary power according to the established case law set out in G 9/91 and G 10/91, and that the Board, after having considered the Appellant's arguments in support of its request, has come to the same conclusion as the opposition division (see points 1.1.2 to 1.1.4 above), the Board is satisfied that in the present case any discussion on the merit of the new ground for opposition during the oral proceedings held before the first instance would have unnecessarily and in unforeseeable way prolonged the proceedings and that the procedural conduct of the opposition division might have seemed hard to the Applicant but it did not amount under the circumstances of this case to a violation of the right to be heard.

- 3.3 Since no substantial procedural violation has been committed, the Board concludes that the Appellant's request for the refund of the appeal fee cannot be allowed.

**Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.
3. The request for the refund of the appeal fee is dismissed.

The Registrar:

The Chairman:

G. Rauh

P. Krasa