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**Datasheet for the decision  
of 12 August 2011**

**Case Number:** T 0037/09 - 3.3.06

**Application Number:** 99916854.5

**Publication Number:** 1066366

**IPC:** C11D 17/00

**Language of the proceedings:** EN

**Title of invention:**  
Detergent compositions

**Patentee:**  
Unilever PLC, et al

**Opponent:**  
Henkel AG & Co. KGaA

**Headword:**  
Detergent compositions/UNILEVER

**Relevant legal provisions:**  
-

**Relevant legal provisions (EPC 1973):**  
EPC Art. 56

**Keyword:**  
"Inventive step (main request): yes"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0037/09 - 3.3.06

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.06  
of 12 August 2011

**Appellant:** Henkel AG & Co. KGaA  
(Opponent) Henkelstrasse 67  
D-40589 Düsseldorf (DE)

**Respondents:** Unilever PLC  
(Patent Proprietors) Unilever House  
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and

Unilever N.V.  
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**Representative:** Baker, Colin John  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 12 November 2008  
rejecting the opposition filed against European  
patent No. 1066366 pursuant to Article 102(2)  
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 rejecting the opposition against European patent No. 1 066 366, relating to detergent compositions.

II. The patent as granted comprises eleven claims, whereby claims 1 and 9 read:

"1. *An aqueous detergent composition, which is in the form of a shear gel comprising:*

*(a) a foaming detergent, wherein said detergent comprises a surfactant selected from the group consisting of anionic surfactants, amphoteric surfactants and zwitterionic surfactants and wherein at least 3% by wt. of said composition comprises anionic surfactant; **characterised in that** there is*

*(b) 5% to 90% by weight of a polyol material selected from the group consisting of glycerol; sorbitol; hexandiol; propan-1,2-diol; 1,3-butylene glycol; propylene glycol; hexylene glycol; and polyethylene glycols and polypropylene glycols having molecular weights in the range 100 to 4,000; and*

*(c) 0.1 to 10% by weight of a polymer or polymer mixture which is capable of forming a reversible gel,*

*wherein said polymer or polymer mixture is present in the composition as a multiplicity of individual gel particles having a particle size of less than 200 micrometres which particles are obtained by dissolving the polymer or polymer mixture above its gel point and from cooling the solution to below its gel point under shear; wherein said polymer or polymer mixture includes a polysaccharide chain of natural origin."*

"9. *A method of preparing a detergent composition according to claim 1 which comprises forming a hot, mobile aqueous solution of the polymer or polymer mixture cooling the solution through its gel temperature while subjecting it to shear, and incorporating foam-forming detergent before or after cooling."*

Claims 2 to 8 define preferred embodiments of the composition of claim 1, while claims 10 and 11 define preferred embodiments of the method of claim 9.

III. The Opponent sought revocation of the patent-in-suit on the grounds of, *inter alia*, lack of inventive step (Articles 100(a) and 56 EPC). During the opposition proceedings it cited, *inter alia*, the document:

(3) = EP-A-0 355 908.

IV. In the decision under appeal the Opposition Division considered, *inter alia*, that the cleanser gel of example 12 of document (3) represented the closest state of the art because it related to a detergent composition from which the subject-matter of claim 1 as

granted only differed in that this latter comprised at least 3% by wt. of anionic surfactant and a polyol at a level of 5 to 90% by wt..

The Opposition Division found that the claimed detergent compositions just solved the technical problem of providing an alternative to the prior art.

Since document (3) contained no clear indication to use levels of anionic foaming surfactants of at least 3% by wt. along with at least 5% by wt. of polyol, and since the other available documents were not concerned with thickened detergent compositions, the subject-matter of claim 1 as granted was found based on an inventive step.

V. The Opponent (hereinafter Appellant) appealed this decision.

The Patent Proprietors (hereinafter Respondents) filed with letter of 17 July 2009 a set of amended claims labelled as Auxiliary Request 1.

VI. The Appellant only disputed the findings in the decision under appeal as to the presence of inventive step in view of document (3).

In the opinion of the Appellant, the skilled person who aimed at avoiding the disadvantage mentioned in paragraph [0022] of the patent specifications - i.e. the instability allegedly observable in detergent compositions obtained by cooling solutions of surfactants and gel-forming polymers of natural origin - would have started from the known cosmetic compositions of the prior art thickened with gel-

forming polymers of natural origin that were surfactant-free and, thus, that would not suffer from such instability. Accordingly, the presence on an inventive step was to be assessed starting from any of examples 10 or 11 of document (3), both comprising polysaccharide microgel particles and a polyol (glycol).

The Appellant stressed that the data in the patent-in-suit would not render plausible the existence of any technical advantage of the patented compositions vis-à-vis the prior art of departure, other than the fat removal properties inevitably produced by the additional presence of at least 3% by wt. of anionic surfactant in the compositions of the invention.

However, to achieve this advantage by adding in the cosmetic composition of the prior art at least 3% by wt. of anionic surfactant represented a conventional measure in the field of cosmetic compositions, as apparent from the many liquid shampoos, shower gels and facial cleansing lotions of the prior art containing such surfactants. Moreover, document (3) itself disclosed anionic emulsifiers among the possible ingredients of the cosmetic compositions described therein.

Nor would any inventive step be required for arbitrarily increasing to 5% by wt. or more the 3% by wt. of glycerol already present in examples 10 and 11 of document (3).

Accordingly, the skilled person starting from any of examples 10 or 11 of document (3) would arrive at the

subject-matter of claim 1 as granted without exercising any inventive activity.

Substantially the same reasons rendered obvious the subject-matter of claim 9 as granted when considering that the method of this claim was substantially the same used in document (3) for preparing the cosmetic compositions containing polysaccharide microgel particles of examples 10 or 11.

VII. The Respondents disputed the Appellant's reasoning by arguing, *inter alia*, that it would be contrary to the jurisprudence of the Boards of Appeal of the EPO to base the assessment of inventive step onto the cosmetic compositions of examples 10 and 11, rather than onto the cleanser gel of example 12. Indeed, only this latter was conceived for the same use as the patented subject-matter.

Since the actual teaching of this example would be that no glycerol had to be present in cleanser compositions stably thickened with polysaccharide microgel particles, document (3) would rather deter the skilled person from using at least 5% by wt. of glycerol or similar polyols in surfactant-containing compositions.

Accordingly, the prior art cited by the Appellant could not possibly have rendered obvious the detergent composition defined in granted claim 1 and/or the method for its production as defined in granted claim 9.

VIII. The Appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The Respondents requested that the appeal be dismissed or that the patent be maintained on the basis of the claims of the Auxiliary Request filed with the letter dated 17 July 2009.

## **Reasons for the Decision**

### *Patent as granted (Respondents' main request)*

1. Inventive step for the subject-matter of claim 1 as granted (Article 100(a) in combination with Article 56 EPC 1973).
  - 1.1 The claimed subject-matter is an aqueous detergent compositions comprising at least 3% by wt. of an anionic foaming surfactant, from 5% to 90% by wt. of a polyol and from 0.1% to 10% by wt. of a polysaccharide in the form of a multiplicity of microgel particles.
  - 1.2 According to the jurisprudence of the Boards of Appeal the starting point for assessing inventive step is normally the state of the art conceived for the same purpose or aiming at the same objective as the claimed invention and having the most relevant technical features in common, i.e. requiring the minimum of structural modifications (see the Case Law of the Boards of Appeal of the EPO, 6th Edition, 2010, I.D.3.1).
  - 1.3 In the present case it is undisputed that the patent-in-suit indicates the objective of the patented subject-matter (i.e. the so-called "subjective" technical problem) in the provision of a thickened



cosmetic composition which comprises a gel-forming polysaccharide and a foaming surfactant and which should not suffer of the instability described in paragraph [0022] of the patent-in-suit.

The Appellant has argued that the skilled person aiming at overcoming this difficulty, would have started from the known cosmetic compositions thickened with gel-forming polymers of natural origin that were surfactant-free and, thus, would not suffer from the undesired instability. Thus, in the opinion of this party, the presence on an inventive step should be assessed starting from the surfactant-free cosmetic compositions disclosed in example 10 or in example 11 of document (3), both comprising about 1% by wt. of polysaccharide microgel particles and 3% by wt. of glycerol.

- 1.4 The Board finds it contrary to the above-recalled jurisprudence of the Boards of Appeal, to assess the presence of inventive step in the present case starting from **surfactant-free** compositions, because these latter are no detergent compositions, i.e. are **neither** conceived for the same purpose **nor** can possibly aim at the same objective as the patented subject-matter.

Already for this reason the Board finds not convincing the Appellant's line of argument as to the obviousness of claim 1 as granted.

- 1.5 Nevertheless the Board considers it appropriate to stress that even if one assumes, for the sake of an argument in favour of the Appellant, that the skilled person could have started from the cosmetic

compositions of e.g. example 11 of document (3) and, thus, even if one identifies, as suggested by the Appellant, the "objective" technical problem underlying the invention in the provision of some fat removal properties to the prior art of departure, still the skilled reader of this citation would **necessarily** be aware that the desired properties have already been obtained in example 12 of the very same document and, in particular, that the aimed technical advantage has been obtained not just by adding a surfactant to the composition of example 11, but by simultaneously **removing the glycerol** ingredient (already present in the cosmetic composition of example 11). Indeed, the description of example 12 at page 10 of document (3) reads:

"Example 12

*A cleanser gel was prepared in the same manner and from the same ingredients as in Example 11, with the exception that instead of glycerol, the starting material contained 7.5 wt.% Brij 58 (Nonionic surfactant ex. Sigma Chemicals Ltd., Poole, Dorset BH17 7NH, England)".*

Accordingly, as convincingly observed by the Respondents, already upon reading document (3) as a whole the skilled person is suggested to provide fat removal activity to the prior art compositions of e.g. example 11 by **replacing** the glycerol therein with the surfactant.

The Board notes, additionally, that the Appellant has not even alleged (not to mention demonstrated with

convincing evidence) that at the time of the invention it was conventional, for instance, to incorporate at least 5% by wt. or more of a polyol into thickened aqueous detergent compositions in general, or specifically into thickened aqueous detergent compositions which comprise at least 3% by weight of the conventional anionic foaming surfactant.

Thus, the Board concludes that document (3) and the conventional use of anionic foaming surfactant for providing fat removal properties to cosmetic compositions are **insufficient** at rendering credible that a skilled person, who is considering the possibility of providing the cosmetic composition of e.g. example 11 of document (3) with some cleansing properties by adding thereto a conventional anionic foaming surfactant, would also have considered obvious to **retain** therein the glycerol ingredient and to **freely increase** the amount of this latter from 3% to e.g. 5% by wt. or more.

Hence, the Appellant's reasoning appears unconvincing even in the hypothetical case that it would be reasonable to assess the inventiveness of the subject-matter of claim 1 starting from surfactant-free cosmetic compositions.

- 1.6 Therefore, the Board concludes that the Appellant has failed in demonstrating that the aqueous detergent composition of claim 1 as granted is obvious.

Hence, the Board sees no reason to depart from the finding in the decision under appeal that the subject-matter of this claim is based on an inventive step and,

thus, complies with the requirements of Article 56 EPC 1973.

2. Inventive step for the subject-matter of claim 2 to 11 as granted.

The reasoning given above for rejecting the Appellant's line of argument as to the obviousness of the composition of claim 1 as granted, applies also to the preferred embodiments of this latter defined in granted claims 2 to 8, as well as to the Appellant's substantially identical line of argument as to the obviousness of the method defined in claims 9 to 11 as granted for preparing the composition of claim 1.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

D. Magliano

P.-P. Bracke