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**Datasheet for the decision
of 27 February 2013**

Case Number: T 0890/10 - 3.3.06

Application Number: 03814720.3

Publication Number: 1572847

IPC: C11D 3/00, C11D 3/37

Language of the proceedings: EN

Title of invention:

Fabric softener compositions containing a mixture of cationic polymers as rheology modifiers

Patent Proprietor:

Colgate-Palmolive Company

Opponents:

UNILEVER PLC / UNILEVER NV
Henkel AG & Co. KGaA

Headword:

Softener with a mixture of cationic polymers/COLGATE-PALMOLIVE CO.

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Inventive step: yes"

Decisions cited:

-

Catchword:

-



Case Number: T 0890/10 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 27 February 2013

Appellant: Henkel AG & Co. KGaA
(Opponent 2) Henkelstrasse 67
D-40589 Düsseldorf (DE)

Representative: Stevermann, Birgit
Henkel AG & Co. KGaA
VTP Patente
D-40191 Düsseldorf (DE)

Respondent: Colgate-Palmolive Company
(Patent Proprietor) 300 Park Avenue
New York NY 10022-7499 (US)

Representative: Jenkins, Peter David
Page White & Farrer
Bedford House
John Street
London WC1N 28F (GB)

Parties as of right: UNILEVER PLC / UNILEVER NV
(Opponents 1) Unilever House, Blackfriars/Weena 455
London EC4P 4BQ/3013 AL Rotterdam (GB)

Representative: Chisem, Janet
Unilever Patent Group
Colworth House
Sharnbrook
Bedford MK44 1LQ (GB)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted 9
March 2010 concerning maintenance of European
patent No. 1572847 in amended form.**

Composition of the Board:

Chairman: P.-P. Bracke
Members: P. Ammendola
U. Tronser

Summary of Facts and Submissions

I. This appeal is from the interlocutory decision of the Opposition Division concerning the maintenance in amended form of European patent No. 1 572 847 according to the then pending second auxiliary request of the Patent Proprietor.

II. Opponents 1 and 2 had sought revocation of the patent-in-suit on the grounds of, *inter alia*, lack of inventive step (Article 100(a) in combination with Article 56 EPC (1973)). During the opposition proceedings reference had been made to documents

(3) = WO-A-02/057400

and

(8) = EP-A-0 394 133.

The Patent Proprietor had filed as second auxiliary request a set of nine claims (hereinafter the claims as maintained) and a description adapted thereto.

III. Claim 1 **as maintained** reads:

"1. *An aqueous fabric softener composition having the rheological properties of flow elasticity and viscosity capable of being readily modified as needed independently of each other to satisfy a consumer preference, said composition comprising:*

a) from 0.01% to 25% by weight, of a cationic fabric softener;

b) an effective amount of a mixture of cationic polymers capable of modifying the aforesaid rheological properties, said mixture comprising:

(i) from 0.01% to 90% by weight of a cationic linear homopolymer that is derivable from the polymerization of a quaternary ammonium acrylate or methacrylate, said homopolymer having a molecular weight of from 10,000 to 30 million; and
(ii) from 10% to 99.99% by weight, of a cationic cross-linked polymer that is derivable from the polymerization of from 5 to 100 mole percent of cationic vinyl addition monomer, from 0 to 95 mole percent of acrylamide, and from 70ppm to 300ppm of a difunctional vinyl addition monomer cross-linking agent, the respective amounts of (i) and (ii) in said mixture being selected to provide the desired rheological properties of viscosity and flow elasticity in said softening composition;

c) from 0% to 10% by weight of a sequestering compound selected from the group consisting of amino-carboxylic acid compounds, organo aminophosphonic acid compound and mixtures thereof;

d) from 0% to 5% by weight of a perfume;

e) from 0% to 10% by weight of an emulsifier;

f) from 0 to 10% by weight of one or more adjuvants selected from the group consisting of dyes, opacifying agents, bluing agents and preservatives; and

g) balance water."

Claims 2 to 8 as maintained define preferred embodiments of the **aqueous fabric softener composition** (hereinafter **AFS composition**) defined in claim 1.

Claim 9 as maintained reads:

"9. *A method for softening fabrics comprising forming an aqueous solution containing an effective amount of the fabric softening composition of claim 1 and then contacting the fabrics to be softened with said aqueous solution.*"

IV. The Opposition Division found that the subject-matter of these claims was, *inter alia*, based on an inventive step for a skilled person starting from the AFS compositions disclosed in document (3) containing as thickener the same **cationic cross-linked polymer** (hereinafter **CC polymer**) that is defined in part b) (ii) of claim 1 as maintained.

Considering that the difference between the claimed subject-matter and the disclosure of this prior art only resided in the presence of component b) (i) (i.e. the **cationic linear homopolymer**, hereinafter **CL homopolymer**) and that Tables 1 and 2 of the patent-in-suit showed the effect of such difference, the Opposition Division concluded that the objective technical problem was how to provide viscous AFS compositions which had satisfactory flow properties for the consumer.

The skilled person starting from this prior art could look to document (8) which disclosed that CL homopolymers (e.g. the homopolymeric N,N-dimethyl ammonium ethyl methacrylate chloride used in the example of this citation) could also be used to control the viscosity in AFS compositions. However there was no indication in document (8) that this ingredient allowed to modify the flow elasticity whilst maintaining the viscosity.

Consequently, in the opinion of the Opposition Division document (8) contained no indication that the addition of the CL homopolymers to the AFS composition of document (3) would provide a solution to the posed problem.

Thus, the subject-matter of the maintained claims was found to comply with Article 56 EPC (1973).

- V. Opponent 2 (hereinafter Appellant) lodged an appeal against this decision.

Oral proceedings were held as scheduled in the announced absence of the duly summoned Opponents 1.

- VI. The Appellant requested that the decision under appeal be set aside and the patent be revoked.

The Patent Proprietor (hereinafter Respondent) requested that the appeal be dismissed or the patent be maintained on the basis of one of the First to Fifth Auxiliary Requests submitted with letter dated 25 February 2013.

VII. The Appellant argued that the subject-matter of the maintained claims was obvious for the skilled person starting from the AFS compositions of document (3) and combining this disclosure with that provided by document (8).

In its opinion, the patent-in-suit provided no evidence of a technical advantage of the claimed AFS compositions because none of the provided examples contained a CC polymer. In particular, the ingredient indicated by the commercial name "*Flosoft DP 200*" was defined in paragraph [0022] as "*a cross-linked copolymer of acrylamide and methacrylate with 150 ppm of methylene bisacrylamide*". Since acrylamide and methacrylate (esters) were non-ionic compounds, "*Flosoft DP 200*" was manifestly not cationic.

In the absence of any evidence of a technical advantage the subject-matter of claim 1 only solved the technical problem of providing an alternative to the prior art.

The explicit teaching in document (8) that a CL homopolymer could be used to control the viscosity of AFS compositions rendered obvious to solve this problem by means of the AFS composition of claim 1 as maintained.

The Appellant argued additionally that the claimed subject-matter remained obvious even in the hypothetical case that the additional presence of CL homopolymer had actually been proved to provide desirable flow elasticity. This effect would be implied and, thus, predictable from the fact that the AFS compositions disclosed in document (8) were "*pourable*".

VIII. The Respondent considered that the Appellant had made the very strong accusation that none of the examples of the patent-in-suit was in accordance with the claims, but had not discharged itself of the burden of proving that "*Flosoft DP 200*" actually was not cationic.

Even though the literal meaning of the definition of this ingredient in paragraph [0022] omitted to explicitly repeat the cationic nature thereof, still the partial definition provided in this paragraph was manifestly to be completed in view of the whole patent disclosure and, in particular, in view of the reference in the same paragraph [0022] to the "*cross-linked copolymer of the mixture of the invention*". Moreover, the cationic nature of "*Flosoft DP 200*" was also explicitly recalled in the Tables of ingredients in Examples 1 and 2.

Hence, the data in the patent-in-suit proved the superior flow elasticity (at comparable viscosity) of the claimed AFS compositions vis-à-vis similar compositions only containing the CC polymer. Thus, these data rendered credible the technical advantages of the invention.

The Respondent stressed that document (8) was silent on flow elasticity of the AFS compositions disclosed therein and that these compositions could not be expected to possess a satisfactory flow elasticity simply because they were disclosed to be "*pourable*". Moreover, document (8) did certainly not attribute the "*pourability*" of these compositions to the presence therein of the CL homopolymer.

Hence, the skilled person had no reason to expect that the simultaneous presence of the two cationic polymers identified in claim 1 as maintained could also allow to modify independently the Brookfield viscosity and the flow elasticity of AFS compositions so as to satisfy any particular consumer preference.

Thus, in the opinion of the Respondent, the Appellant had provided no argument justifying the reversal of the finding of the Opposition Division as to the non-obviousness of the claimed AFS compositions.

Reasons for the decision

Respondent's main request (claims as maintained)

1. Inventive step (Article 56 EPC (1973)): claim 1 as maintained
- 1.1 Claim 1 as maintained (see above Section III of the Facts and Submissions) defines an AFS composition comprising - in addition to a cationic softener, water and optional ingredients - a mixture of two cationic polymers, i.e. the CL homopolymer defined in b) (i) and the CC polymer defined in b) (ii). The claim requires the claimed composition to possess desirable viscosity and flow elasticity.
- 1.2 The Board notes that also document (3) discloses stable AFS compositions possessing, *inter alia*, variable viscosity and stringiness (see in document (3) page 1, lines 6 to 8, in combination, in particular, with from page 12, line 8 to page 13, line 23). Hence, the Board

sees no reason to depart from the findings of the Opposition Division (see above Section III of the Facts and Submissions), undisputed among the Parties, that this citation represents a suitable starting point for the assessment of inventive step and that the subject-matter of claim 1 as maintained only differs from the AFS composition of this prior art for the additional presence of the CL homopolymer.

- 1.3 According to the Appellant the patent-in-suit contained no example comprising a CC polymer and, thus, no example of the claimed AFS compositions (see above Section VII of the Facts and Submissions). Thus, the patent-in-suit did not render credible any technical advantage of the claimed AFS compositions vis-à-vis the prior art.

The Board notes, however, that the sole basis for this reasoning is the literal meaning of the portion of paragraph [0022] of the patent-in-suit which defines the "*Flosoft DP 200*" ingredient of all the examples of the invention given in the patent-in-suit.

It is undisputed that the literal meaning of such definition does not describe or imply *per se* the cationic nature of this ingredient.

The Board concurs however with the Respondent that a skilled person would necessarily determine the meaning of this portion of paragraph [0022] in its context and with a mind willing to understand.

Already the fact that this definition is immediately preceded in the same paragraph by the wording "*In*

another preferred embodiment the cross-linked polymer used in the polymeric mixture of the invention is" (emphasis added by the Board) renders evident that it must be interpreted taking into account the whole disclosure of the polymeric mixture of the invention given in the patent-in-suit, which consistently indicates in the preceding as well as in the subsequent paragraphs and in the maintained claim 1, that the polymeric mixture is made of two cationic polymers, a cross-linked one and a linear one (see, for instance, claim 1 as maintained and paragraphs [0001], [0014] and [0027]). In addition, the term "*cationic*" is explicitly used to qualify the "*Flosoft DP 200*" in both the Tables giving the compositions of typical AFS compositions of the invention in paragraphs [0046] and [0054].

Thus the Board concludes that the skilled reader of the patent-in-suit would reasonably conclude that the definition of the commercial product "*Flosoft DP 200*" given in paragraph [0022] is incomplete because this commercial ingredient is also certainly a cationic polymer.

Hence, the Board sees no reason to deviate from the finding of the Opposition Division that Tables 1 and 2 of the patent-in-suit prove that the additional presence of the CL homopolymer allows the claimed AFS compositions to produce a superior flow elasticity whilst maintaining the Brookfield viscosity, vis-à-vis the prior art of departure (only containing the CC polymer).

Accordingly, the Board comes to the conclusion that the subject-matter of claim 1 as maintained solves vis-à-

vis the prior art the technical problem of **rendering available AFS compositions displaying new and more satisfactory combinations of the two relevant rheological properties.**

- 1.4 Therefore, the assessment of inventive step boils down to the question whether a skilled person upon combining the teachings of documents (3) and (8) would have expected that the posed technical problem could be solved by the simultaneous presence of the CC polymer (used as thickener in document (3)) and of the CL homopolymer (used as thickener in document (8)).

The Board notes the undisputed fact that document (8) contains no direct information on the flow viscosity of the AFS compositions disclosed therein.

Moreover, even assuming correct the Appellant's unsupported allegation (disputed by the Respondent) that the disclosure in the paragraph bridging pages 5 and 6 of document (8) (see in particular page 6, lines 1 to 3) that these AFS compositions are "*pourable*" would also imply the achievement of a satisfactory flow elasticity, still this passage of document (8) attributes such property (as well as the stability of the AFS compositions disclosed therein) exclusively to the high concentrations of the "*active fabric softening components*" which are explicitly identified at the beginning of the same paragraph and are different from the CL homopolymer (see line 56 of page 6 of document (8)).

Thus, the Board finds that document (8) provides not even an indirect suggestion that the CL homopolymer

used as thickener in the AFS compositions disclosed therein, may also influence the flow elasticity of these latter.

1.5 Already for this consideration the Board concludes that the combination of documents (3) and (8) **cannot** possibly render obvious to solve the posed technical problem by means of the AFS composition defined in claim 1 as maintained. Hence, the Board has no reason to depart from the finding of the Opposition Division that the subject-matter of this claim complies with Article 56 EPC (1973).

2. Inventive step (Article 56 EPC (1973)): claims 2 to 9 as maintained

The same reasoning given above applies identically to the subject-matter of the claims 2 to 8 as maintained which define preferred embodiments of the composition of claim 1, as well as to the method for softening fabrics by using such composition defined in claim 9 as maintained.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

D. Magliano

P.-P. Bracke