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Datasheet for the decision of 20 February 2009

Case Number: T 1867/06 - 3.3.06

Application Number: 00926888.9

Publication Number: 1175484

IPC: C11D 3/50

Language of the proceedings: EN

Title of invention:
Laundry compositions

Patentee:
Unilever N.V., et al

Opponent:
The Procter & Gamble Company

Headword:
Rinse conditioner/UNILEVER

Relevant legal provisions (EPC 1973):
EPC Art. 54(1)(2)(3), 56, 158

Keyword:
"Novelty (Main request): no - feature of use not distinguishing the claimed product"
"Inventive step (Auxiliary request): no - technical effect not due to the distinguishing features has to be disregarded in the evaluation of inventive step - obvious to try with expectation of succes"

Decisions cited:
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Catchword:
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Case Number: T 1867/06 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 20 February 2009

Appellant: (Opponent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 24 October 2006 rejecting the opposition filed against European patent No. 1175484 pursuant to Article 102(2) EPC 1973.

Composition of the Board:

Chairman: P.-P. Bracke
Members: L. Li Voti
A. Pignatelli

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. 1 175 484, concerning a composition for use in the rinsing of laundry.

Claim 1 of the patent as granted read as follows:

"1. A composition for use in the rinsing of laundry containing particles with perfume located or absorbed in or on the particles, characterised in that the particles are formed of cross-linked organic polymeric material and have a mean particle size not greater than 1 micron wherein there is cross-linking between at least 0.5% by number of the total number of monomer residues present in the polymer."

Dependent claims 2 to 14 related to specific embodiments of the claimed composition.

Claim 15 related to a method of treating laundry by means of the claimed composition and claim 16 to a method of making a rinse conditioner by mixing a fabric softening material with particles as defined in claim 1.

II. In its notice of opposition the Opponent, referring *inter alia* to documents

(1): WO-98/28396 and
(4): WO-99/38946,
sought revocation of the patent on the grounds of Article 100(a), because of lack of novelty and of inventive step of the claimed subject-matter.

III. In its decision, the Opposition Division found that

- document (1) did not disclose explicitly and unambiguously a composition comprising particles as defined in claim 1; therefore, the claimed subject-matter was novel over document (1);

- document (1), dealing with the same general technical problem as the patent in suit had to be considered to represent the closest prior art;

- document (1) considered cross-linked polymers to be less sticky than linear polymers and, consequently, to be preferred;

- however, document (1) did not contain any teaching to use cross-linked polymer particles in order to enhance perfume deposition;

- to the contrary, the comparison between linear and cross-linked polymers contained in example 9 would have suggested to the skilled person that linear polymers had to be preferred in order to enhance perfume deposition;

- therefore, starting from the general teaching of document (1), the subject-matter of claim 1 as granted differed in that the polymeric particles had a mean particle size below 1 micron and were made of cross-linked polymer;

- neither document (1) nor the remaining prior art contained any hint to use carrier particles of cross-

linked polymers having a mean particle size below 1 micron in order to enhance perfume deposition as shown in the examples of the patent in suit;

- to the contrary, the teaching of document (1) that perfume would be released too fast by using carrier particles having a mean particle size of less than 1 micron would have suggested to the skilled person that such smaller particles were not suitable for depositing sufficient perfume onto the fabric;

- therefore, document (1) would have led the skilled person away from using particles as defined in claim 1 of the patent in suit.

As regards document (4), the Opposition Division remarked that the skilled person, following the teaching of this document, could have provided by simple trial and error a composition falling within the scope of the claims but he would not have found any motivation to select all the features of claim 1 in order to solve the technical problem of improving perfume deposition during fabric rinsing.

The subject-matter of the claims thus involved an inventive step.

IV. Appeal was filed against this decision by the Opponent (Appellant).

The Respondents and Patent Proprietors submitted with letter of 19 June 2007 an amended set of 14 claims to be considered as auxiliary request.

Claim 1 according to the auxiliary request reads as follows:

"1. An aqueous liquid composition for use in the rinsing of laundry containing from 0.5 to 90% by weight of a fabric softening material and particles with perfume located or absorbed in or on the particles, characterised in that the particles are formed of cross-linked organic polymeric material and have a mean particle size not greater than 1 micron wherein there is cross-linking between at least 0.5% by number of the total number of monomer residues present in the polymer, the particles being present in such amount that the perfume therein or thereon is from 0.1 to 10% by weight of the composition."

Oral proceedings were held before the Board on 20 February 2009.

During oral proceedings the novelty of the claims over the disclosure of document (4) was also discussed.

V. The Appellant submitted orally and in writing *inter alia* that

- the claimed subject-matter lacked novelty over the disclosure of document (1);

- the starting point for evaluating inventive step was represented by document (1);

- example 9 of document (1) would not have taught to the skilled person that linear polymers were to be

preferred to cross-linked ones in order to enhance perfume deposition;

- to the contrary, the teaching of document (1) was focused on the use of cross-linked polymer particles in order to improve perfume deposition;

- the compositions disclosed in document (1) differed from those of claim 1 according to the main or the auxiliary request only insofar as the polymer particles had a mean particle size greater than 1 micron;

- however, this technical difference did not contribute to the solution of the technical problem underlying the invention;

- moreover, even though document (1) indicated that particles having a mean size of 1 micron or less would release the perfume faster than desired, this statement had to be considered only as a subjective opinion with regard to the invention disclosed in document (1) and did not constitute a technical prejudice against the use of particles having smaller mean sizes;

- therefore, the claimed subject-matter did not involve an inventive step.

VI. The Respondents submitted in writing and orally *inter alia* that

- the claimed subject-matter was novel over document (1);

- moreover, it was also novel over document (4) since the compositions disclosed in that document were used for washing and thus were necessarily intrinsically different from compositions used for rinsing as those of claim 1 according to the patent in suit;

- document (1) did not contain any suggestion that the selection of particles of cross-linked polymers with a mean particle size not greater than 1 micron would bring about any advantage in terms of perfume deposition as shown in the patent in suit;

- to the contrary, example 9 of document (1) would have suggested to the skilled person to use linear polymers instead of cross-linked ones for enhancing perfume deposition and the teaching of document (1) would have dissuaded the skilled person from trying particles having a mean particle size not greater than 1 micron;

- therefore, the claimed subject-matter involved an inventive step.

VII. The Appellant requests that the decision under appeal be set aside and that the patent be revoked.

The Respondents request that the appeal be dismissed or, as an auxiliary request, that the patent be maintained on the basis of the 14 claims filed with letter of 19 June 2007.

Reasons for the Decision

1. Respondent's main request (Claims 1 to 16 as granted)

1.1 *Novelty*

1.1.1 The subject-matter of claim 1 according to the main request relates to a composition for use in the rinsing of laundry containing particles having a mean particle size not greater than 1 micron, which particles are formed of cross-linked organic polymeric material having at least 0.5% cross-linking by number of the total of monomer residues, wherein perfume is located or absorbed in or on these particles.

Document (1) discloses particles formed of organic polymer carrying a perfume, which polymer can be cross-linked with, for example, 1% of a cross-linking agent (page 2, lines 20 to 25 read in combination with page 8, lines 18 to 26 and page 9, lines 23 to 27). The polymer particles have an average particle size of at least 10 microns (page 4, lines 19 to 20), i.e. a mean particle size above the limits of claim 1 according to the main request.

Document (1) states: "we have observed that the rate of release of fragrance may be faster than desired if the particles are of very small size such as average size of 1 micron" (page 4, lines 21 to 24), thus indicating that smaller particles were also tested.

However, the Board remarks that document (1) does not indicate precisely which kind of polymer particles with a mean particle size of 1 micron was tested. Moreover,

according to the teaching of document (1) linear polymers can be used as alternative to cross-linked ones (page 9, lines 19 to 22).

Therefore, document (1) does not contain a direct and unambiguous disclosure of cross-linked particles having a mean particle size of 1 micron and carrying a perfume.

The subject-matter of claim 1 thus is novel over the disclosure of document (1).

1.1.2 Document (4) is an international application published on 05 August 1999, i.e. after the priority date of 05 May 1999 validly claimed by the patent in suit.

This document, complying with the requirements of Articles 158 (1) and (2) EPC 1973 (the designated states for which fees were paid after entering the European phase were DE, ES, FR, GB and IT), is state of the art under Article 54(3) EPC 1973.

Document (4) discloses a perfuming system consisting of particles formed of cross-linked organic polymer which particles carry a perfume, wherein the content of cross-linking monomers is of 0.01 to 1%, preferably 0.01 to 0.5% (page 1, lines 16 to 24 in combination with page 3, lines 30 to 37). Therefore, this document discloses explicitly particles of cross-linking polymers having at least 0.5% of cross-linking monomers as required in claim 1 according to the main request. Moreover, such a perfuming system is used as an aqueous dispersion wherein the polymer particles have a particle size of 20 to 700 nanometres (0.02 to 0.7 microns), i.e. a mean particle size not greater than

1 micron (see page 5, lines 31 to 37). The same disclosure can be derived from the combination of claims 1, 8 and 14 of this document.

Claim 1 according to the main request, though specifying that the claimed composition is for use in the rinsing of laundry, is not restricted to compositions explicitly labelled as rinsing compositions but encompasses all compositions suitable for the rinsing of laundry, for example, a composition consisting only of an aqueous dispersion of the specified perfumed polymeric particles.

Such dispersion is explicitly disclosed also in document (4) as explained hereinabove. Therefore, the fact that the dispersions of document (4) are destined to be used in a different environment, i.e. during washing (see page 1, lines 14 to 15), does not jeopardize the finding that this document discloses a composition falling within the extent of claim 1 according to the main request.

Therefore, the Board concludes that the subject-matter of claim 1 according to the main request lacks novelty.

2. Auxiliary request

2.1 *Novelty*

Since document (4) does not disclose a composition comprising particles of cross-linked polymers carrying a perfume and 0.5 to 90% by weight of a fabric softening material as required in claim 1 according to the auxiliary request (see point IV above), the Board

is satisfied that the claims according to the auxiliary request are novel over the cited prior art.

2.2 *Inventive step*

2.2.1 The invention of claim 1 relates to an aqueous liquid composition for use in the rinsing of laundry containing from 0.5 to 90% by weight of a fabric softening material and particles formed of cross-linked organic polymeric material with a cross-linking of at least 0.5% by number of the total number of monomer residues present in the polymer, which particles have a mean particle size not greater than 1 micron, wherein perfume is located or absorbed in or on these particles, such a perfume being contained in an amount of from 0.1 to 10% by weight of the composition (see point IV above).

As explained in the description of the patent in suit, rinse conditioners are products which are designed to be added to water used for the rinsing of laundry after washing with a detergent composition. Such conditioners contain a material whose function is to confer a benefit to the laundry after the laundry has been rinsed and dried, one of the main benefits delivered by such products being softness. Moreover, it is normal to include perfume in such rinse conditioners, firstly to enhance the attractiveness of the product to a user, and secondly to deliver the perfume to the laundry (paragraphs 2 and 3 of the patent in suit).

Furthermore, perfume can produce adverse changes to the viscosity of rinse conditioner compositions, especially when these contain a substantial percentage of fabric

softener. In extreme cases the addition of perfume to a concentrated rinse conditioner composition can cause it to gel and become immobile (paragraph 19).

The technical problem underlying the invention is formulated in the patent in suit as the provision of a fabric rinsing conditioning composition which provides superior delivery of perfume to fabrics and better physical stability (see paragraph 13).

2.2.2 Both parties agreed that document (1) represents the most suitable starting point for evaluating inventive step. In fact, this document deals explicitly with at least one of the technical problems addressed to in the patent in suit, in particular with the enhancement of the perfume delivery to fabrics from a rinse conditioning composition (see page 2, line 20 to 27; page 26, lines 1 to 4).

However, the parties did not find agreement upon the real teaching of document (1) and upon which embodiment of document (1) should be considered the starting point for the evaluation of inventive step.

In fact, as already explained in point 1.1.1 hereinabove, document (1) does not necessarily require the use of particles formed of cross-linked polymers like in the patent in suit but encompasses also the use of linear polymers (page 9, lines 19 to 22).

The Board remarks that the preferred particles according to the explicit teaching of document (1) are formed of cross-linked polymer (page 8, lines 18 to 22) and that linear polymers, even if considered suitable

for the invention, are explicitly indicated as producing particles which are somewhat sticky, for which reason cross-linking is considered to be convenient (page 9, lines 19 to 22).

As correctly submitted by the Respondents, example 9 shows indeed that linear polymers can be used in order to deliver perfume onto the fabrics from a rinsing liquor (page 49, line 9 to page 50, line 3) and that the tested linear polymer is slightly better than a similar cross-linked one in terms of stability of the perfume upon storage of the rinse conditioner containing it (page 50, line 17 to page 51, table at the bottom of the page).

However, document (1) does not contain any teaching with respect to a possible relationship between the stability of the perfume in the polymeric particles upon storage and the capability of the polymeric particles to deliver the perfume onto the fabric and no evidence of the existence of a related common general knowledge has been submitted by the Respondents.

Therefore, in the Board's judgement, the skilled person, by reading the results of the perfume stability upon storage of example 9, would have not learnt that linear polymer particles would deliver more perfume onto the fabrics than cross-linked ones.

The Board thus finds that the skilled person, by taking into account the whole content of document (1), would have certainly learnt that linear polymers are suitable for delivering perfume onto fabrics and that they might have some advantages in terms of perfume retention upon

storage but he would have learnt that linear polymers are **less preferable** as explicitly taught in the description because they provide somewhat sticky particles.

Therefore, the Board is convinced that the teaching of document (1) with regard to the improvement of perfume delivery onto fabrics relates primarily to the use of cross-linked polymer particles; in fact, apart from example 9, all other examples of document (1) relating to fabric rinsing illustrate the use of cross-linked polymers (see examples 6 to 8).

The Board thus takes the rinsing compositions of document (1) containing a cross-linked polymer as the starting point for the evaluation of inventive step.

Such a composition of document (1), which comprises also amounts of softening agent and of perfume in accordance with the requirements of claim 1 according to the auxiliary request (see e.g. example 6), differs from that according to claim 1 according to the auxiliary request only insofar as it comprises polymeric particles having a mean particle size greater than 1 micron (see page 5, lines 1 to 4; page 41, line 10 to page 43, line 3).

2.2.3 As explained in the patent in suit, the superior delivery of perfume leads to an increase in the amount of perfume which remains with the fabric after drying, for example in a heated tumble dryer (see paragraph 15); moreover, the use of particles of colloidal size, i.e. not greater than 1 micron, permit to renounce to the use of a suspending agent (paragraph 16); possible

adverse effects on the viscosity of the rinse composition are also mitigated or avoided (paragraph 19).

As regards perfume substantivity/intensity, i.e. the alleged improved delivery of perfume onto the fabrics, the patent in suit contains only comparative examples with respect to the use of linear polymer particles of similar size (see examples 4 and 7) or with respect to compositions wherein the perfume is not contained within the polymeric particles (example 5). No comparison is available with respect to the use of cross-linked polymer particles of greater size, as those disclosed in document (1). As regards physical stability the only comparison available in the patent in suit is one with respect to a composition wherein the perfume was not incorporated into the polymeric particles (example 6). However, the compositions tested in the patent in suit do not contain a suspending agent.

Document (1) teaches, like the patent in suit, that the use of cross-linked polymers leads to the enhancement of the deposition of the perfume onto fabrics and of the extent to which deposited perfume survives a subsequent drying step (page 2, line 25 to page 3, line 3). This technical effect is shown, for example, in examples 6 to 8. Moreover, example 9 shows also that a composition comprising a cross-linked polymer is physically stable and does not gel. The compositions of document (1) contain, however, a nonionic surfactant as dispersing agent (see page 32, lines 30 to 34 and page 33, lines 24 to 26, page 42, lines 20 to 26).

The Board thus finds that the Respondents have not shown that the compositions of claim 1 present superior delivery of perfume to the fabrics or superior physical stability with respect to the compositions of document (1) comprising cross-linked polymer particles of greater size but only that they are physically stable without the presence of a suspending agent.

Moreover, the fact that cross-linked polymer particles of size not greater than 1 micron provide a better perfume deposition onto fabrics than linear polymer particles of similar size, as shown in said examples 4 and 7 of the patent in suit, is not a technical effect due to the distinguishing feature of the claimed subject-matter with respect to the compositions of document (1) containing cross-linked polymer particles of greater size, which represent the closest prior art, and thus is to be disregarded in the evaluation of inventive step.

Since document (1) had already solved the technical problem addressed to in the patent in suit concerning the enhancement of the perfume delivery to fabrics from a rinse conditioning composition, the technical problem underlying the invention can be defined, in the Board's view, only as the provision of an alternative fabric rinse softening composition capable of releasing perfume and of showing physical stability without the use of a suspending agent.

In the light of the examples of the patent in suit the Board is convinced that this technical problem has been successfully solved by means of a composition as claimed.

2.2.4 The Board remarks that document (1) teaches that it has been observed that the rate of release of fragrance **may be** faster than desired if the particles are of very small average size such as 1 micron (page 4, lines 21 to 24).

In the Board's view, this teaching does not amount to a prejudice against the use of such smaller particles, the preparation of which apparently does not cause a problem to the skilled person, but represents a finding correlated to the specific purpose of the invention of document (1) for which it is preferable to have an increased retention and a slower release of the perfume (page 5, lines 1 to 4), a technical effect that is even not mentioned in the patent in suit. To the contrary, the above mentioned finding confirms that particles of smaller size are expected to deliver perfume onto the fabrics.

The Board concludes that it would have been obvious for a skilled person, starting from the disclosure of document (1) and faced with the problem underlying the invention of providing an alternative composition capable of releasing perfume onto the fabrics and having physical stability without the use of a suspending agent, to try cross-linked polymer particles of smaller size, e.g. 1 micron, which particles would have been expected to provide the well known properties of colloidal suspensions also acknowledged in the patent in suit (page 10, lines 2 to 7), reporting that "**As is known, particles of colloidal dimensions are kept in suspension by Brownian motion and by the effect**

of charges on the particles surfaces, which cause the particles to repel each other and stay apart.".

Therefore, the skilled person, without requiring any inventive skill but just following the information contained in document (1), could and would have tested smaller particles of cross-linked polymers with regard to their capacity of delivering perfume onto the fabrics with the expectation of obtaining a stable suspension not needing the addition of any suspending agent.

The Board concludes that the subject-matter of claim 1 according to the auxiliary request lacks an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

G. Rauh P.-P. Bracke