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**Datasheet for the decision
of 20 October 2006**

Case Number: T 0427/04 - 3.3.06

Application Number: 98906279.9

Publication Number: 0970170

IPC: C11D 1/83

Language of the proceedings: EN

Title of invention:

Stable microemulsion cleaning composition

Applicant:

Colgate-Palmolive Company

Opponent:

-

Headword:

Microemulsion Composition/COLGATE

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (no): obvious alternative"

Decisions cited:

-

Catchword:

-



Case Number: T 0427/04 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 20 October 2006

Appellant: Colgate-Palmolive Company
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 14 October 2003
refusing European application No. 98906279.9
pursuant to Article 97(1) EPC.

Composition of the Board:

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

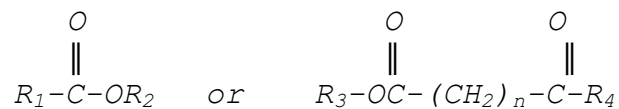
Summary of Facts and Submissions

I. This appeal is from the decision of the Examining Division dated 14 October 2003 refusing European patent application No. 98 906 279.9, published as WO 98/35007, on the ground that the subject-matter of the claims according to the then pending sole request did not comply with the requirements of Article 52(1) and (2) EPC in combination with Article 56 EPC.

II. These claims had been filed under cover of a letter dated 29 April 2002. Claim 1 thereof read:

"1. A composition comprising approximately by weight:

- a) 6 to 50% of at least one surfactant ;
- b) 0.5 to 20% of an aliphatic ester having the formulas of



wherein R_1 , R_3 and R_4 are C_2 to C_8 alkyl groups, and R_2 is a C_3 to C_8 alkyl group, and n is a number from 3 to 8;

- c) 0 to 22% of a solubilizing agent ;
- d) 0.5 to 15% of at least one cosurfactant ; and
- e) the balance being water, wherein the composition has a pH of 1 to 11 and is optically clear having at least 90% light transmission."

III. In its decision the Examining Division found that the clear cleaning compositions based on water insoluble (lipophilic) perfumes disclosed e.g. in example 9 of document

(1) EP-A-0 316 726

addressed the same technical problem of the present application and that the claimed compositions provided an obvious alternative to this prior art.

- IV. The Applicant (hereinafter "Appellant") appealed this decision and filed with the grounds of appeal an amended description.
- V. The Appellant maintained substantially that the Examining Division had failed to recognise the importance of the **faster initial oil uptake** (hereinafter "faster IOU") of the claimed compositions demonstrated by the data reported in the patent example, whose meaning and measuring conditions had been clarified in the Appellant's letter of 2 September 2003. Thus the Examining Division had erred in not allowing a reformulation on this basis of the technical problem solved by the claimed subject-matter vis-à-vis the perfume-containing compositions of document (1). The Appellant argued that the observed faster IOU was also logically linked to the cleaning performance of the claimed compositions.

Moreover, document (1) would only suggest the use of typical perfumes, i.e. complex mixtures of ingredients, substantially different from the specific ester "b)" as defined in claim 1.

- VI. The Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the set of claims filed with letter of 29 April 2002

and the description as amended with the grounds of appeal.

Reasons for the Decision

Interpretation of claim 1

1. The Board notes that the keto ester formula given for ingredient "b)" in claim 1, when interpreted in view of the description, appears to contain an evident typing error (omission of an "O" atom linking the R₄ end group to the preceding carboxy). Indeed, the specific diester ingredients mentioned in the invention example indicate that the correct formula can only reasonably be that contained in page 16 and describing diesters. This has also been agreed by the Appellant.

Article 123(2) EPC and Article 52(1) in combination with Article 54 EPC

2. The Board is satisfied that the subject-matter of claim 1 is based on the application as originally filed and novel vis-à-vis the cited prior art. Detailed reasoning needs not to be given because of the negative finding on inventive step (see hereafter).

Inventive step (Articles 52(1) and 56 EPC)

3. Claim 1
 - 3.1 This claim (see above points II and 1) defines optically clear aqueous cleaning compositions characterised by the presence of surfactant,

cosurfactant and the specific aliphatic mono or diester "b)".

The technical problem explicitly addressed in the present application is undisputedly that of providing aqueous clear cleaning compositions which produce excellent removal of greasy soils from hard surfaces and require reduced wiping and/or rinsing (see e.g. page 1, lines 5 to 8, and page 3, lines 11 to 13 and 22 to 24).

3.2 The Board notes that document (1) describes at page 2, lines 2 to 5, substantially the same technical problem mentioned in the application.

Further similar definitions of the advantage of the composition disclosed in this citation are present in page 3, lines 6 to 8, of document (1).

3.2.1 The Board wishes to stress that no meaningful difference in the technical problem addressed may be derived from the simple fact that the level of grease removal achieved is differently qualified in document (1) and in the application by means of vague adjectives. This is evident when considering that the same occurs **within** the present application (wherein the achieved level of grease removal is qualified as "*especially effective*" in page 1, lines 5 to 8, "*superior*" in page 3, lines 11 to 13 or "*excellent*" in page 17, lines 1 to 2) and **within** document (1) (compare "*good*" in page 3, lines 6 to 8, with "*improved*" in page 4, lines 19 to 22, and "*superior*" in page 5, lines 22 to 25, and page 17, lines 38 to 39).

3.2.2 Hence, the Board sees no reason to deviate from the finding of the Examining Division that the compositions of document (1) address the **same** technical problem mentioned in the present application (see above 3.1) and, thus, represent the reasonable starting point for the assessment of inventive step.

3.3 With respect to the technical problem credibly solved by the claimed compositions vis-à-vis this prior art, the Appellant has argued that **the first three columns** of the data under the heading "*Oil uptake kinetics (seconds)*" in the table of the example of the application would demonstrate that the claimed compositions displayed faster IOU than the prior art. Instead, the data in the last two columns of the table, wherein the invention samples displayed worse oil uptake than the comparative samples, would be disregarded by the skilled person, since they would only reflect the approaching oil saturation of the compositions. Accordingly, it would be justified to reformulate the technical problem solved by the claimed compositions on the basis of the proven faster IOU.

3.3.1 According to the established jurisprudence of the Boards of Appeal, a reformulation of the technical problem solved by the invention is only possible with respect to further technical problems that the skilled person may recognise as implied by or related to that initially suggested in the application (see Case Law of the Boards of Appeal of the EPO, 4th edition 2001, I.D.4.5).

3.3.2 The Board notes that, as explained by the Appellant in the letter of 2 September 2003, the cited table refer

to the dropwise addition of five drops of olive oil to 50ml of composition under stirring and the figures reported in the table indicate the time in seconds needed for the composition to become clear again after each drop's addition. Hence, the reported data are not related to the cleaning of hard surfaces and, therefore, the demonstrated improvement of the speed with which the first three drops of oil are dissolved in 50 ml of the stirred cleaning composition appears *per se* not to be a technical problem evidently implied by or related to the excellent removal of greasy soils from hard surfaces aimed at in the application.

3.3.3 Despite the manifest differences between the test used and the actual cleaning of hard surfaces, the Appellant has maintained that it had developed the former in order to evaluate the speed of the latter. In the opinion of the Appellant, there would be a self-evident **logical link** between the measured parameter and the uptake of oily soils under the actual conditions of use of the cleaning compositions. Hence, the observed faster IOU would necessarily imply that the claimed compositions were also faster in removing oily soils from hard surfaces.

3.3.4 The Board notes initially that there is no apparent obstacle in simulating real cleaning of hard surfaces, as evident from the "*dynamic degreasing*" test - used in document (1) (see the tables of examples 8 and 9) and also described (although without giving any result thereof) at pages 24 to 25 of the application as originally filed - wherein one measures the number of sponge strokes required to remove a grease film deposited on tiles.

On the other hand, as conceded by the Appellant too, the measured IOU is no standard parameter normally used for evaluating the speed with which detergents clean hard surfaces. It seems instead to the Board that the phenomena occurring between the greasy soils adhering on a hard surface and a layer of liquid cleaning composition applied thereupon (as such, e.g. by spraying, or by application means, e.g. a sponge or a tissue) as well as those occurring in the subsequent wiping or rinsing appear much more complex than the direct dissolution of oil drops as measured in the test used. The Board finds therefore that, in the absence of any supporting evidence, it appears speculative rather than logical to expect that the carried measurement of the speed of oil drop dissolution should also be suitable for reliably ranking the tested compositions in respect of their speed of cleaning hard surfaces under real-life conditions.

Moreover, the absence of any well-established and/or experimentally proven correlation between the test used and the cleaning actually achieved of hard surfaces deprives the Appellant's argument of credibility (see above point 3.3) that the data reported in the last two columns of the table (i.e. those referring to the addition of the fourth and fifth drops) would only indicate the approaching saturation of the cleaning compositions by the oil and, thus, would be disregarded by the skilled person.

Indeed, even assuming, for the sake of an argument in favour of the Appellant, that the skilled person would attribute the poor test results of the samples of the invention upon addition of the fourth and fifth oil

drops to the saturation of the compositions, still no reasonable justification has been given for concluding that these tests in which the compositions are allegedly approaching saturation would be less representative of what actually occurs in real-life cleaning of hard surfaces than the three preceding oil drop additions.

- 3.3.5 For all these reasons, the Board concludes that the oil uptake data in the application represent neither *per se* a further technical problem implied by or related to that initially addressed in the application, nor are credible evidence that the claimed compositions have actually solved the further technical problem of providing faster removal of greasy soils from hard surfaces.

Hence, the Board finds that no reformulation of the technical problem solved may be justified by these data.

- 3.4 The Board notes additionally that the remaining data reported in the table of the example of the application demonstrate that the other properties measured for the samples of the invention are substantially comparable to those observed for the samples representing the prior art. Hence, no advantage of the claimed subject-matter may possibly be supported by these data.

- 3.5 On the other hand, the Board has no reason for doubting that the claimed compositions have actually solved the technical problem addressed in the application (see above point 3.1), i.e. have solved the same technical problem already solved by the compositions of the prior art. Accordingly, the Board finds that the technical

problem credibly solved by the claimed subject-matter vis-à-vis the prior art is that of providing **further** aqueous clear compositions producing excellent removal of greasy soils from hard surfaces and requiring reduced wiping and/or rinsing.

3.6 The Board notes that some of the aqueous clear compositions disclosed in example 9 of document (1) contain about 7 wt% of a mixed surfactant system and about 4 wt% of an ether cosurfactant. They also contain 1.0 wt% of a perfume ingredient whose components are, *inter alia*, terpenes (ranging in an amount from 2 to up to 70 wt% of the perfume ingredient) and unspecified amounts of unspecified esters (see the table of example 7).

The Board notes further that document (1) requires the perfume ingredient to be lipophilic (and, thus, water insoluble) in order to act as solvent for the oily soil (see document (1) e.g. page 4, lines 6 to 7, page 5, lines 3 to 6, or page 17, lines 33 to 38) and to be present in an amount of perfume preferably ranging e.g. up to 10 wt% of the composition (see page 5, lines 12 to 13).

Hence, the claimed compositions differ from those described in example 9 of this citation only in that the former must contain the given amount of specific aliphatic mono or diester "b)", whereas the latter contain an unspecified amount of unspecified lipophilic odoriferous esters.

3.7 Therefore, it must be established whether or not an inventive activity is required in order to solve the problem identified in point 3.5 above by replacing the

unspecified amount of unspecified lipophilic odoriferous ester ingredient of the compositions of the prior art by the amount given in claim 1 of the specific aliphatic ester "b)".

- 3.8 The Board finds that it was obvious for the skilled reader of document (1) to solve the problem posed by realising further specific embodiments of the composition defined in generic terms in this citation. In particular, in view of the above-cited explicit disclosure in document (1) as to the variable composition of the lipophilic odoriferous ingredient acting as oily soil solvent, it was obvious to replace the unspecified ester component or the whole perfume of example 9 by any known lipophilic and odoriferous substance and, in particular, by those belonging to the classes of ingredients mentioned in page 4, lines 23 to 31, of document (1) and, thus, also to the group of odoriferous lipophilic esters.

On the other hand, the Board notes that, as mentioned at page 2, paragraph "iv)" of the decision under appeal, the formulas of ingredient "b)" of claim 1 embrace several esters that are evidently lipophilic and odoriferous. This has not been disputed by the Appellant.

Hence, the Board concludes that no inventive activity of the skilled person is required to arrive at the claimed subject-matter by arbitrarily selecting among the lipophilic and odoriferous substances generically defined in document (1) a specific odoriferous ester according to the formulas given for ingredient "b)" in present claim 1 and by arbitrarily selecting its amount

within the amount ranges also generically disclosed in document (1) for the lipophilic and odoriferous ingredient.

3.8.1 The Appellant has argued instead that document (1) (see page 4, lines 29 to 31) would rather teach to use typical perfumes, i.e. those formed by a plurality of lipophilic and odoriferous ingredients and that the skilled person would have no reason for considering the ester "b)" defined in claim 1 of the application as equivalent to the complex perfume mixtures used in the examples of document (1).

3.8.2 This argument is however not convincing, since

- claim 1 under consideration does not exclude the additional presence of the other typical perfume ingredients (e.g. terpenes, ethers, etc..), i.e. the claim embraces compositions possibly obtainable by using as source of ingredient "b)" an odoriferous mixture according to the definition of the "*typical perfume*" also given in document (1),

and

- this citation explicitly mentions also the possibility that the perfume ingredient may be formed by a single odoriferous ingredient (see page 4, lines 23 to 27).

Hence, the claimed compositions represent specific embodiments of the compositions defined in general in document (1) and, thus, belong to the solutions of the

posed technical problem that are evident to the skilled reader of this citation.

- 3.9 The Board concludes, therefore, that the subject-matter of claim 1 of the sole request is not based on an inventive step and, therefore, that this request does not comply with the provisions of Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

P.-P. Bracke