

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen
(D) No distribution

**Datasheet for the decision
of 22 September 2011**

Case Number: T 1851/08 - 3.3.07

Application Number: 00928812.7

Publication Number: 1178774

IPC: A61K 7/32

Language of the proceedings: EN

Title of invention:

Antiperspirant and deodorant compositions containing cyclohexasiloxane

Patent Proprietors:

THE PROCTER & GAMBLE COMPANY

Opponents:

L'OREAL

Headword:

-

Relevant legal provisions:

EPC Art. 56

Relevant legal provisions (EPC 1973):

-

Keyword:

"Main and Auxiliary Requests: inventive step (no)"
"Arbitrary selection - obvious"

Decisions cited:

T 0939/92

Catchword:

-



Case Number: T 1851/08 - 3.3.07

D E C I S I O N
of the Technical Board of Appeal 3.3.07
of 22 September 2011

Appellants:
(Patent Proprietors)

THE PROCTER & GAMBLE COMPANY
One Procter & Gamble Plaza
Cincinnati
Ohio 45202 (US)

Representative:

Adams, Harvey Vaughan John
Mathys & Squire LLP
120 Holborn
London EC1N 2SQ (GB)

Respondents:
(Opponents)

L'OREAL
14, Rue Royale
F-75008 Paris (FR)

Representative:

-

Decision under appeal:

Decision of the Opposition Division of the
European Patent Office posted 10 July 2008
revoking European patent No. 1178774 pursuant
to Article 101(3)(b) EPC.

Composition of the Board:

Chairman: J. Riolo
Members: F. Rousseau
P. Schmitz

Summary of Facts and Submissions

I. The appeal by the Patent Proprietors (Appellants) lies from the decision of the Opposition Division posted on 10 July 2008 revoking European patent No. EP-B-1 178 774 in respect of European patent application No. 00 928 812.7, which is based on the International application PCT/US00/12154 filed on 4 May 2000 and published under WO 00/69402. Independent claims 1, 2 and 8 of the patent in suit read:

"1. Antiperspirant compositions comprising:

- a) from 30% by weight of cyclohexasiloxane,
- b) from 0.1% to 50% by weight of an antiperspirant active,
- c) from 0.1% to 50% by weight of a suspending agent, and
- d) from 1% to 35% by weight of a nonvolatile polydimethylsiloxane fluid,

wherein the compositions contain less than 1% by weight of cyclotetrasiloxane.

2. Anhydrous antiperspirant compositions comprising

- a) from 20% by weight of a cyclohexasiloxane,
- b) from 0.1% to 50% by weight of an antiperspirant active, [and]
- c) from 0.1% to 50% by weight of a suspending agent, and
- d) from 1% to 35% by weight of a nonvolatile polydimethylsiloxane fluid,

wherein the compositions are anhydrous and contain less than 1% by weight of cyclotetrasiloxane.

8. Solid or semi-solid deodorant compositions comprising
- a) from 5% to 99% by weight of cyclohexasiloxane,
 - b) from 0.1% to 50% by weight of deodorant active, and
 - c) from 0.1% to 50% by weight of a suspending agent,

wherein the compositions are anhydrous and are substantially free of nitrogen-containing polymers and cyclotetrasiloxane, and wherein the compositions are not in liquid form."

II. The Opponents (Respondents) had requested in the notice of opposition the revocation of the patent in its entirety on the grounds that its subject-matter extended beyond the content of the application as filed (Article 100(c) EPC) and lacked novelty and inventive step (Article 100(a) EPC). The following documents were *inter alia* submitted before the Opposition Division:

- D1 WO-A-00/61094
- D3 WO-A-00/61096
- D4 US-A-5 531 986
- D10 Soap, Perfumery & Cosmetics, page 54, July 1998
- D11 Cosmetics and Toiletries, vol. 111, page 19, September 1996
- D15 Dow Corning® 345 Fluid, Sales Specifications, November 1997 and
- D16 Dow Corning® 345 Fluid, Sales Specifications, October 1998.

III. The appealed decision was based on the patent as granted (Main Request) and on an amended set of claims consisting of claims 1 to 7 as granted as an Auxiliary Request which was submitted during the oral proceedings held on 10 April 2008. As regards the ground of opposition under Article 100(c) EPC, the Opposition Division held that the deletion of the upper limit for component (a) did not add any new range which was not already inherently defined in the original claims, because the maximum of 98,8% by weight for constituent (a), resulting from the definition of minima for the other constituents of the composition, was inherently defined in original claims 1 and 2. Hence, claims 1 and 2 of the patent as granted did not extend beyond the content of the application as originally filed. Concerning novelty, claims 8 and 9 of the patent as granted were anticipated by specific formulations disclosed in D1, D3, D4, D10 and D11 which concerned solid or semi-solid antiperspirant compositions containing Dow Corning DC® 345 as source of cyclohexasiloxane. In order to show that the amount of cyclohexasiloxane contained in the cited formulations fell in the range of concentrations defined in claims 8 and 9 as granted, the Opposition Division referred to D15 and D16, which indicated the content of cyclohexasiloxane contained in product DC® 345. Thus, the Main Request was not allowable. The claimed subject-matter of the Auxiliary Request was not objected to lack novelty. As regards inventive step, D4 constituted the closest prior art, in particular the general disclosure in column 2, lines 24-32, as this document also addressed the problem of providing a stable antiperspirant or deodorant composition which

leaves a low-residue after application. In view of the examples of the patent in suit, the problem solved over D4 could not be formulated in terms of an improvement regarding stability and/or low residue performance, but merely as the provision of alternative antiperspirant deodorant compositions leaving low residue after application. The solution provided by the patent in suit, which consisted in using less than 1 wt.-% of cyclotetrasiloxane and employing cyclohexasiloxane and non volatile polydimethylsiloxane in the amounts defined in claims 1 and 2, was comprised within the teaching of D4 and therefore obvious to the skilled person. Thus, the Auxiliary Request was not allowable, as its claims 1 and 2 lacked an inventive step.

- IV. With the statement setting out the grounds of appeal dated 20 November 2008, the Appellants submitted two sets of claims as their Main and First Auxiliary Requests. The claims according to the Main Request differed from those as granted in that the amount of cyclohexasiloxane had been restricted in claim 8 to the range from 30% to 75% by weight. The set of claims according to the Auxiliary Request corresponded to that of the Auxiliary Request underlying the impugned decision, i.e. consisted of claims 1 to 7 as granted.
- V. The parties were summoned to attend oral proceedings on 22 September 2011 and a Board's communication dated 8 August 2011 was issued. The Appellants with their electronically filed submissions of 22 August 2011 announced that they would not attend the Oral Proceedings. They confirmed their requests and submitted amended pages 1 to 7 and 10 to 17 of the description adapted to the claims requests on file.

Oral proceedings, held on 22 September 2011 in the announced absence of the Appellants, were continued in accordance with Rule 115(2) EPC.

VI. The Appellants' arguments, as far as they are relevant for the present decision, can be summarised as follows:

- (a) The amendment to claim 8 as granted, which was based on the original disclosure, in particular on page 6, lines 1-4, restored novelty.
- (b) It was not denied, as had been held by the Opposition Division, that D4 constituted the closest prior art and that the problem solved by the compositions according to claims 1 and 2 as granted over that prior art was the provision of alternative antiperspirant deodorant compositions leaving low residue after application.
- (c) It was rather argued that the skilled person would not have had any motivation to modify the compositions disclosed in D4 by varying the amount of volatile and non-volatile silicones. The combination of technical features recited in independent claims 1, 2 and 8 was so specific, that it was difficult to see how the Opposition Division could have concluded that the person of ordinary skill in the art, when starting from the generic disclosure in document D4, would have routinely formulated one of the claimed compositions without being directed to do so by the teaching of the patent in suit. The relevant question to be answered was not whether the skilled person could have formulated one of the claimed composition, but whether he would have

done so in light of some direction or motivation (i.e. a "signpost") within the state of the art. This followed from e.g. Decision T 2/83 (OJ EPO 1984, 265). In the absence of any specific direction to modify a particular example within the prior art D4 as to arrive at the claimed invention, the latter could not be considered as obvious. Following decision T 939/92 (OJ EPO 1996, 309) the skilled person was assumed to act not out of idle curiosity but with a specific technical purpose in mind. The Opposition Division, however, had failed to provide any reasoning whatsoever as to why a person of ordinary skill in the art would have been undertaking such variations.

- (d) Furthermore, even if the skilled person had contemplated such a modification of the compositions disclosed in D4, he would certainly not have modified them in the manner that would be necessary in order to arrive at a composition within the terms of the present claims. The volatile silicone material required within the compositions of document D4 was not necessarily a cyclic volatile silicone, so that there was no specific direction to increase the level of volatile silicone by an adjustment in the level of the cyclic volatile silicone components, let alone by increasing the level of cyclohexasiloxane, as cyclotetrasiloxane and cyclopentasiloxane were more preferred than cyclohexasiloxane. D4 did in fact clearly teach away from the claimed compositions, which were substantially free or contained less than 1% by weight of cyclotetrasiloxane. Furthermore, if the skilled

person, starting from any of the compositions that are disclosed in D4, wanted for some unknown reason to increase the level of volatile silicone, it could not arrive at the claimed subject-matter when using the volatile silicon materials DC®245 and DC®345 which were recommended in D4. As these materials contained only a minor portion of cyclohexasiloxane, it would be necessary in order to arrive at the amount of cyclohexasiloxane defined in the Main and the Auxiliary Request to use a total amount of DC®245 or DC®345 going beyond the maximum amount of volatile silicone authorized by D4. Thus, one could not, starting from D4, arrive at the claimed compositions without directly contravening the teaching of that document.

- (e) Hence, one could arrive at the modifications of D4 as proposed in the Main and Auxiliary Request only on the basis of hindsight knowledge of the present invention. The claimed subject-matter was therefore inventive.

VII. The arguments of the Respondents, as far as they are relevant for the present decision, can be summarised as follows:

- (a) Claims 1 and 2 according to either the Main or the Auxiliary Request extended beyond the content of the application as originally filed, as the original application did not disclose in the absence of any definition for an upper limit for said compound a minimum amount of cyclohexane of either 30 wt.-% or 20 wt.-%. Amended claim 8 also

contravened the requirements of Article 123(2) EPC, as the range of 30 to 75% for the amount of cyclohexasiloxane was not contemplated for solid compositions. The paragraph on page 6, which had been referred to by the Appellants, did not concern solid compositions.

- (b) As concerns inventive step, D4 constituted the closest state of the art. The technical problem solved over D4 was the provision of further antiperspirant and deodorant compositions with low residue performance. D4 taught amounts of volatile silicone as high as 60% and recommended among the volatile silicones, cyclomethicone having from 3 to 7 silicon atoms, to which belonged cyclohexasiloxane. Even, if the silicon material DC®345, a mixture of cyclopentasiloxane and cyclohexasiloxane, was cited, the teaching of D4 was not limited to commercially silicone materials disclosed in that document, but encompassed the use of cyclosiloxanes alone, to which cyclohexasiloxane belonged. In the absence of any evidence for a technical effect brought about by the selection of cyclosiloxane among the class of volatile silicones disclosed in D4, the subject-matter of present claims 1 to 10 amounted to an arbitrary selection for which no inventive step could be acknowledged. Reference was made to T 939/92 (*supra*). The claimed subject-matter, according to either the Main or Auxiliary Request lacked therefore an inventive step.

VIII. The Appellants requested that the decision under appeal be set aside and that the patent be maintained on the

basis of the Main Request or, in the alternative, on the basis of the Auxiliary Request, both submitted with the statement setting out the grounds of appeal dated 20 November 2008.

- IX. The Respondents requested that the appeal be dismissed.
- X. At the end of the oral proceedings, the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

Main Request

Article 100(c) EPC

2. The maximum amount of cyclohexane implicitly defined in claims 1 and 2 by the definition of the minimum amounts of the other constituents of the claimed compositions, is also implicitly defined in claims 1 and 2 as originally filed, as said minimum amounts were not subject to any amendment. The Board's conclusion concurs therefore with that of the Opposition Division that claims 1 and 2 as amended during the grant procedure, despite the fact that they do not explicitly define a maximum amount of cyclohexane, do not extend beyond the content of the application as originally filed.

Amendments

3. Contrary to the Respondents' opinion, the Board is satisfied that amended claim 8 according to the Main Request meets the requirements of Article 123(2) EPC, as that there is no doubt that the more limited concentration range for the cyclohexasiloxane defined in the first paragraph of page 6 of the application as originally filed is meant to apply to any of the antiperspirant compositions defined in original independent claims 1, 2 and 8. It is however not necessary to give a full reasoning in this respect as can be seen below this issue is in the present Appeal case not decisive.

Novelty

4. In view of the amendment carried out in claim 8 as granted, novelty of the claimed subject-matter was not disputed anymore. The Board is also satisfied that the limitation of the range of concentrations for the amount of cyclohexasiloxane operated in claim 8 allows to distinguish the claimed subject-matter from the disclosure of any of documents D1, D3, D4, D10 and D11. As the present requests fail on another ground, there is no need in the present appeal decision to give a reasoning in respect of that issue either.

Inventive Step

5. According to the Appellants' opinion the reasoning on inventive step in the contested decision was based on hindsight knowledge of the present invention and the Opposition Division had failed to provide any reasoning

whatsoever as to why a person of ordinary skill in the art starting from D4 would have undertaken variations leading to the subject-matter of the patent in suit. The Appellants referred in particular to decision T 939/92 (*supra*) stating that a person skilled in the art must be assumed to act not out of idle curiosity but with some specific technical purpose in mind. The idea underlying this principle, which is described in the second paragraph of point 2.4.2 in decision T 939/92 (*supra*) is, that an assessment of inventive step requires to take into consideration the technical purpose of the claimed measures. For this reason, as reminded in point 2.4.3 of decision T 939/92 "*the Boards of Appeal consistently decide the issue of obviousness on the basis of an objective assessment of the technical results achieved by the claimed subject-matter, compared with the results obtained according to the state of the art*". This way of judging inventive step, referred to as the "problem-solution approach", ensures, if applied correctly, an assessment of inventive step on an objective basis, i.e. devoid of hindsight reasoning. The Appellants, however, contrary to the Opposition Division did not use such approach, which necessitates to establish the closest state of the art, to determine in the light thereof the technical problem which the invention addresses and successfully solves, and to examine the obviousness of the claimed solution to this problem in view of the state of the art.

Closest state of the art

6. Document D4, which also addresses the problem of providing an antiperspirant or deodorant composition

which leaves a low-residue after application, was held in the decision under appeal, in line with the Respondents' submissions, to represent the closest state of the art. In the absence of any argument by the Appellants, as to why another document should be considered as the closest prior art, the Board sees no reason to depart from the above finding. The Board also agrees that illustrative compositions of D4 as disclosed in column 2, lines 24-33 of that document, which relate to antiperspirant solid stick compositions solving the above problem (see column 2, lines 1-19 and 40-44) constitute a suitable starting point for assessing inventive step. These illustrative compositions of D4 comprise in wt.-% based on the total weight of the composition:

- (1) 10%-60% (most preferably 30%-40%) of a volatile silicone material;
- (2) 5.01%-50% (most preferably 5.01%-15%) of a non-volatile silicone material;
- (3) 1%-15% of dimethicone copolyol,
- (4) 2%-10% of a high-melting-point wax;
- (5) 2%-30% of a low-melting-point wax; and
- (6) 10%-30% of an antiperspirant active material.

Problem and solution

7. There is not the slightest indication, let alone any argument by the Appellants, for any particular technical effect arising from the selection of the various compounds and their respective amounts defined in the present independent claims. It was thus not disputed by the Appellants that the technical problem objectively solved over D4 should be formulated like in

the impugned decision as the provision of further antiperspirant compositions which as in D4 exhibit low residue performance, i.e. to provide further compositions which solve the same problem as in D4. The Board is also satisfied in particular in view of Examples 9 and 10 of the patent in suit that this problem has been effectively solved by the compositions according to the Main Request.

Obviousness

8. It remains to be decided whether or not the skilled person starting from the antiperspirant compositions disclosed in column 2, lines 24-33 of D4 and wishing to solve the above defined problem would have been guided by the available prior art to the compositions of the patent in suit, in particular to measures a) to d) defining the compositions of present claim 1. Starting from D4 and faced with the problem of providing further compositions solving the same problem as in D4, it would have been obvious for the skilled person to turn first to the teaching of D4 concerning the nature and the amount of the various compounds comprised in the compositions disclosed in column 2, lines 24-33, i.e. compounds (1) to (6).

9. As regards the volatile silicone material (1), the skilled person would consider all volatile silicone materials taught in D4, for example all cyclic polydimethylsiloxanes having from 3 to 7 silicon atoms disclosed in column 4, lines 13-25, to be equally suitable for solving this problem and therefore to be equally "suggested" by this document, since no further property in addition to those disclosed in D4 is sought

to be obtained. Thus, the selection of cyclohexasiloxane, a well-known cyclic polydimethylsiloxane, which per definition is free from cyclotetrasiloxane, would have lain within the routine activity of the skilled person faced with the above defined objective problem. The same line of reasoning holds true for the selection of the well-known class of non-volatile polydimethylsiloxane fluids from the non-volatile silicone materials (2) of D4, which according to the passage in column 4, lines 37 to 47 of D4, can be in particular a polyalkylsiloxane. Thus, starting from D4, the selection of cyclohexasiloxane as volatile silicone material, the absence of cyclotetrasiloxane and the selection of polydimethylsiloxane as non-volatile silicone material (2) was for the skilled person seeking to solve the above defined problem obvious. The Appellants' argument that the skilled person using the volatile silicon materials DC@245 and DC@345 recommended in D4 would not arrive at the claimed subject-matter fails to persuade, since the teaching of D4 is not restricted to those particular silicones. Moreover, in the absence of any element indicating that a particular unexpected technical effect does occur within and only within the selected ranges defining the amounts of cyclohexasiloxane and non-volatile polydimethylsiloxane fluid, let alone of any argument by the Appellants in this respect, the Board can only conclude that the concentration values lying in the area of overlap between the amounts defined in present claim 1 and those defined in D4, which constitutes for both components the majority of the claimed values, are arbitrary and therefore an obvious choice for the skilled person. Thus, it must be concluded that the skilled person would arrive in an

obvious manner to measures a) and d) of present claim 1, as well as to the use of compositions which do not contain cyclotretrasiloxane.

10. As regards to the obviousness of measure c), paragraph [0034] of the patent in suit indicates that the terms "suspending agent" or "thickening agents" are used interchangeably and include *"any material known or otherwise effective in providing suspending, gelling, viscosifying, solidifying or thickening properties or which otherwise provide structure to the final product."* Thus, components (3) to (5) used in the compositions disclosed in column 2, lines 24-33 of D4, i.e. dimethicone copolyol, high-melting-point and low-melting-point waxes, are all suspending agents within the meaning of the patent in suit, which as regards dimethicone copolyol is confirmed by column 6, lines 19-26 of D4 and concerning high-melting-point and low-melting-point waxes is confirmed by paragraphs [0037] and [0038] of the patent in suit, in combination with the passage from column 4, line 48 to column 5, line 17 of D4. The total amount of suspending agents (3) to (5) allowed by the above specific compositions of D4 is within the range of 5 to 55 wt.-% based on the total weight of the composition, which almost entirely overlaps with the amount of suspending agent defined for measure c). In addition, the range of concentrations of the antiperspirant (6) used in the starting point for assessing inventive step is encompassed by the broader range b) defined in present claim 1. It follows therefore that the skilled person starting from the teaching of D4 would also arrive in an obvious manner to features b) and c) of present claim 1.

11. Consequently, the subject-matter of claim 1 of the patent in suit turns out to be merely the result of multiple arbitrary choices lying within the routine activity of the skilled person faced with the objective problem of providing starting from the disclosure of D4 further antiperspirant compositions. The subject-matter of claim 1 therefore does not involve an inventive step. The Main Request is therefore not allowable.

Auxiliary Request

12. The same conclusion also applies for the Auxiliary Request, as its claim 1 is identical to claim 1 of the Main Request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

S. Fabiani

J. Riolo