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**Datasheet for the decision
of 24 September 2015**

Case Number: T 0142/12 - 3.3.07

Application Number: 98912132.2

Publication Number: 0973492

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A61K8/58

Language of the proceedings: EN

Title of invention:
ANTIPERSPIRANT STICK WITH IMPROVED CHARACTERISTICS

Patent Proprietor:
Colgate-Palmolive Company

Opponents:
Henkel AG & Co. KGaA
UNILEVER PLC / UNILEVER NV

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)



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Case Number: T 0142/12 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 24 September 2015

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
25 November 2011 concerning maintenance of the
European Patent No. 0973492 in amended form.**

Composition of the Board:

Chairman J. Riolo
Members: A. Usuelli
 D. T. Keeling

Summary of Facts and Submissions

- I. European patent No. 973 492 was granted on the basis of European patent application No. 98912132.2.
- II. Two oppositions were filed against the patent on the grounds that its subject-matter lacked novelty and inventive step (Article 100(a) EPC), the invention was not sufficiently disclosed (Article 100(b) EPC) and its subject-matter extended beyond the content of the application as filed (Article 100(c) EPC).

The documents filed during the opposition proceedings included the following:

D1: WO 91/04009

D5: GB 2 291 805

D20: Annex A, Research Report 4512

- III. The opposition division's decision was based on a main request and seven auxiliary requests.

Claim 1 of auxiliary request 7, which was filed during the oral proceedings on 27 October 2011 and was held patentable by the opposition division, read as follows:

"1. A solid stick cosmetic composition exhibiting substantially less visible residue after application to human skin, comprising:

(1) 17-40 wt.% of a gelling agent in an amount so as to form a stick product wherein the gelling agent consists of 2-17 wt.% of the total weight of the composition of high melting point waxes having a melting point in the range of 65-101 °C; and 10-25 wt.% of the total weight of the composition of low melting point waxes having a

melting point in the range of 37-65 °C wherein said low melting point waxes can be selected from silicone waxes;

(2) 30-50 wt.% of a solvent for the gelling agent, in a type and amount such that the gelling agent can dissolve therein and can gel therefrom wherein the solvent is selected from the group consisting of volatile cyclic silicones and aliphatic hydrocarbons;

(3) 10-27 wt.% of a non-volatile emollient that is not a silicone and which has a refractive index of at least 1.4460, and which has adsorption and desorption properties relative to a selected active material wherein the non-volatile emollient:

(i) is present in an amount so as to reduce any whitening effect of an active material on the skin; and

(ii) is selected from the group consisting of
(a) esters which are not otherwise classified as alkoxyated carboxylic acids, glyceryl esters, isethionates, lanolin derivatives, phosphorous compounds, sulfosuccinates or sulfuric acid esters, wherein the emollient is C12-C15 alkyl benzoate; wherein the composition comprises a total amount of 10-27 wt.% of a non-volatile emollient that is not a silicone and which has a refractive index of at least 1.4460 and which has adsorption and desorption properties relative to a selected active material wherein the non-volatile emollient:

(i) is present in an amount so as to reduce any whitening effect of an active material on the skin; and

(ii) is selected from the group consisting of
(a) esters which are not otherwise classified as alkoxyated carboxylic acids, glyceryl esters, isethionates, lanolin derivatives, phosphorous compounds, sulfosuccinates or sulfuric acid esters;

(b) alkoxyated alcohols wherein the alcohol portion has from 2-18 carbons and the alkylene oxide is selected from the group consisting of ethylene oxide; polyoxyethylene; and polyoxypropylene having a number of alkyleneoxide units of from 2-53;

(4) an effective amount of 10-30 wt.% of an antiperspirant active and

(5) 1-15 wt.% of a surfactant selected from the group consisting of ethoxylated fatty acids having 2-20 ethoxylate groups and made from fatty acids having 12-18 carbons."

IV. According to the decision under appeal, the subject-matter of claim 1 of the main request and of auxiliary requests 1 to 5 did not comply with the requirements of Article 123(2) EPC, while claim 1 of auxiliary request 6 did not comply with the provisions of Article 123(3) EPC.

Auxiliary request 7 was considered to comply with the requirements of Articles 123(2) and (3), 84 and 54 EPC. The closest prior art for the assessment of inventive step was represented by document D1. The compositions of claim 1 differed from the compositions disclosed in D1 in the nature and in the amount of the non-volatile emollient. The experimental data of document D20 showed that the use of an ester emollient as defined in claim 1 resulted in a reduction of the white residue on the skin. The technical problem was to be seen in the provision of a solid stick composition with reduced white residue. The solution to this problem as defined in claim 1 of auxiliary request 7 was not obvious from the teaching of document D1 considered alone or in combination with D5.

- V. The opponents (appellant-opponent I and appellant-opponent II) lodged an appeal against that decision.
- VI. With the reply to the statement of the grounds of appeal filed on 17 August 2012 the patent proprietor (respondent) requested that the appeal of appellant-opponent I be dismissed and that the appeal of appellant-opponent II be deemed inadmissible or, if admitted, be dismissed.
- VII. The appellants submitted their arguments on inventive step starting from document D1 as the closest prior art. In their opinion the claimed composition differed from the one of D1 in the amount and in the nature of the substance used as masking agent. They underlined that the comparative report D20 contained various deficiencies. In particular, they observed that the composition Phantom LSSID Base, which should have been representative of the compositions of D1, contained PPG-butyl 14 ether as the non-volatile masking agent while in document D1 PPG-10 butanediol and/or hydrogenated polyisobutene were used instead. Thus, the experiments of D20 could not serve as the basis for any comparison with the closest prior art. The technical problem was therefore to be seen in the provision of a further antiperspirant solid composition. The same masking agent as found in the opposed patent was used in the compositions disclosed in D5. Hence, the subject-matter of claim 1 was obvious in view of the combined teachings of documents D1 and D5.
- VIII. The respondent agreed with the appellants in the choice of D1 as the closest prior art and in the identification of the distinguishing features. In respect to the experiments disclosed in D20, it

observed that the comparative composition Phantom LSSID Base contained as masking agent PPG-14 butyl ether, i.e. an alkoxyated alcohol. On page 2 of document D1 it was stated that the masking agent could be selected in a list of substances which included the alkoxyated alcohols. The composition of the product Phantom LSSID Base reflected therefore the disclosure of D1. The use of a different masking agent, such as PPG-10 butanediol or hydrogenated polyisobutene, would have also required to respect the range of 5 to 9% disclosed at page 4 of D1. However, since in claim 1 of the patent in suit the minimum concentration of the emollient/masking agent was 10%, this would have had the consequence of comparing compositions containing different amounts of masking agent. The comparative data of D20 showed that the use of a C12-C15 alkyl benzoate as masking agent provided less white residue on the skin and increased glide. The technical problem was therefore to produce an antiperspirant stick composition which could exhibit a reduced whitening effect as well as increased glide.

As to the obviousness of the solution, the respondent remarked that D5 did not address the problem of formulating solid stick compositions. Furthermore, this document did not suggest that the use of C12-C15 alkyl benzoate esters would have provided an improved masking effect as compared to the masking agents of D1. There was also no hint in document D5 to use the C12-C15 alkyl benzoate esters in the same amount claimed in the patent in suit.

- IX. The Board issued a communication pursuant to Rule 15(1) RPBA on 26 June 2015. In relation to the experimental report D20 it remarked that the composition of the comparative example did not reflect the teaching of D1 in relation to the preferred substances to be used for

reducing the white residue. The Board considered then that the technical problem was to be seen as the provision of a further solid stick composition.

- X. By letter dated 31 July 2015 the respondent announced that its representative would not attend the oral proceedings.
- XI. Appellant-opponent I and appellant-opponent II requested that the decision under appeal be set aside and that the patent be revoked.
- XII. The respondent requested that the appeal of appellant-opponent II be deemed inadmissible and that both appeals be dismissed.

Reasons for the Decision

1. Admissibility of the appeal of appellant-opponent I

The admissibility of the appeal of appellant-opponent I was not questioned by the respondent. The Board sees no reason to raise any objection of its own.

The appeal the appellant opponent I is therefore considered admissible.

2. Inventive step

The invention underlying the patent in suit is directed to an antiperspirant stick composition (paragraph [0019] and claim 1).

2.1 *Closest prior art*

2.1.1 The Board agrees with the parties and with the decision under appeal that document D1 represents the closest prior art.

2.1.2 This document relates to a non-aqueous antiperspirant product comprising *inter alia* an antiperspirant active ingredient and a non-volatile masking agent (claim 1). It was not disputed by the parties that the solid stick composition defined in claim 1 of the patent in suit differs from the compositions disclosed in D1 in the amount and in the nature of the substance used as masking agent, i.e. in the presence of 10-27% wt. of a C12-C15 alkyl benzoate.

The Board sees no reason to deviate from the approach followed by the parties.

2.2 *Technical problem*

2.2.1 The problem addressed in the patent in suit is to provide an antiperspirant stick composition that exhibits substantially less whitening residue upon application to the skin than conventional stick products (paragraphs [0015] to [0018]).

As evidence of the achievement of this objective, the respondent submitted during the opposition procedure the experimental report D20.

2.2.2 Table 9 of document D20 reports the results of comparative tests carried out with two antiperspirant compositions named "Phantom-24% active" and "LSSID Base".

Phantom-24% active is a composition according to the invention containing *inter alia* 10% weight of C12-C15 alkyl benzoates. The composition LSSID Base, which should represent a composition according to D1, differs from the Phantom-24% active mainly in that it contains 13% wt of PPG-14 butyl ether instead of the C12-C15 alkyl benzoates.

One of the parameters tested in the experiment is the white residue delivered on the forearm. The results disclosed in Table 9 show that the composition Phantom-24% active leaves less white residue on the skin than the LSSID Base.

- 2.2.3 According to D1 (page 2, lines 12 to 17), the masking agent can be an aliphatic compound which contains single-bonded oxygen functional groups, such as alkoxyated alcohols. The PPG-14 butyl ether used in the LSSID Base composition is included in this general definition. The most preferred masking agents according to the teaching of D1 are however the products PPG-10 butanediol and hydrogenated polyisobutene (Panalene). These substances are mentioned on page 2 (lines 18 and 19), page 4 (lines 17 to 19) and claim 3. Moreover, each of the five compositions exemplified in D1 contains at least one of PPG-10 butanediol or Panalene.

The composition LSSID Base is not exemplified or otherwise disclosed in D1. Examples 1 and 2 of D1 relate to compositions containing PPG-14 butyl ether as one of the components. However, this substance is described in D1 as a supplemental emollient which can be added to the compositions to improve properties such as smoothness, glide and perception of drier (page 5 lines 9 to 16). Nowhere is it stated in D1 that PPG-14 butyl ether can be used as masking agent.

- 2.2.4 Thus, the general description and the examples of document D1 clearly indicate that the preferred substances to be used in order to reduce the white residue left on the skin are the products PPG-10 butanediol and Panalene, which are however not included in the LSSID base. This composition is conceptually comprised in the content of D1 because the substance used as masking agent, i.e. PPG-14 butyl ether, falls within the broad class of aliphatic compounds containing a single-bonded oxygen (see above). However, this substance is not identified in D1 as an example of the individual molecules useful as masking agent.
- 2.2.5 In the Board's opinion, a product used in a comparative test as representative for the disclosure of a prior art document should be selected, whenever possible, among the products exemplified or otherwise described in this prior art document. Arbitrarily selecting for the comparison a product (or a component of a composition) covered by a general embodiment of the prior art document, but not disclosed therein, inevitably reduces the objectivity of the experiment. This is particularly true when the selection is made within a class of compounds which is defined in very broad terms, such as the aliphatic compounds containing a single-bonded oxygen. Since an infinite number of compounds are covered by such a definition, an objective comparison can only be made using one the compounds which are specifically described in the prior art document as belonging to this general class.
- 2.2.6 As a general principle, the features of a composition used in a comparative test as representative for the closest prior art, should reflect in a fair manner the general teaching of this document. In the present case,

the composition of LSSID Base cannot be considered to reflect the teaching of D1 since it neither contains the PPG-10 butanediol nor the Panalene which are consistently described throughout the disclosure of D1 as the preferred substances to be used for reducing the white residue.

2.2.7 The respondent remarked that the description of D1 suggested using PPG-10 butanediol or Panalene in an amount of from 5 to 9%, i.e. less than the minimum threshold of 10 wt% required by claim 1. For this reason the comparative composition was prepared using a different masking agent.

However, as acknowledged also by the respondent, the claimed compositions differ from the compositions of D1 not only in the nature of the masking agent but also in its amount. Thus, it would have been appropriate in this case to compare compositions containing different amounts of masking agent. Hence, this argument is not persuasive.

2.2.8 The Board concludes therefore that the results of the experimental report D20 cannot be taken into account for the formulation of the technical problem since the comparative composition LSSID Base is not representative of the teaching of D1.

2.2.9 The technical problem over D1 is therefore to be formulated as the provision of a further antiperspirant solid composition.

2.3 *Obviousness*

2.3.1 Document D5 relates to antiperspirant compositions comprising a residue masking agent having a refractive

index greater than about 1.40 (page 3 "Summary of the invention"). C12-C15 alkyl benzoates are cited among the preferred masking agents (page 9, lines 12 to 17) and are used in all the compositions exemplified in D5. The amount of residue masking agent present in the composition according to D5 is from about 1% to about 20% by weight and preferably from about 10% to about 13% by weight (paragraph bridging pages 8 and 9).

Although the antiperspirant compositions prepared in the examples of D5 are in liquid form, the invention as defined in the description (see "Summary of the invention" and claim 1) is not limited to the liquid form.

Thus, D5 discloses antiperspirant compositions comprising as masking agents the same substances used in the patent in suit in an amount which overlaps with the range of 10 to 27% weight defined in claim 1.

- 2.3.2 In the Board's view, replacing the masking agents of D1 with the C12-C15 alkyl benzoates disclosed in D5, is well within the routine practice of the skilled person faced with the mere problem of providing a further antiperspirant solid composition.

The fact that the examples of D5 relate to liquid compositions would not be regarded as an obstacle. As explained above, the teaching of D5 is not limited to liquid compositions. Furthermore, the purpose of the masking agents is to reduce the visual appearance of the antiperspirant active materials (see D5, page 8, lines 21 to 22). The substances used as antiperspirant active materials in liquid compositions are to a large extent the same substances used for solid formulations (see D1, page 3, lines 2 to 14 and D5, page 4, lines 1

to 9). Hence, the skilled person would regard the the C12-C15 alkyl benzoates as suitable masking agents also for solid compositions.

The Board concludes therefore that the subject-matter of claim 1 does not comply with the requirements of Article 56 EPC.

3. Admissibility of the appeal of appellant-opponent II

3.1 The admissibility of the appeal of the appellant-opponent II was objected to by the respondent.

The Board notes that appellant-opponent II did not submit any request going beyond the requests of appellant-opponent I (see point XI above). Under these circumstances, considering that a valid appeal has been filed by appellant-opponent I, a decision not to admit the appeal of the appellant-opponent II would have no effect on the outcome of the present proceedings.

Hence, a decision in this respect is not required.

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:



S. Fabiani

J. Riolo

Decision electronically authenticated