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**Datasheet for the decision
of 12 May 2022**

Case Number: T 0835/19 - 3.3.07

Application Number: 04005224.3

Publication Number: 1570833

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A61K8/891, A61K8/92, A61K8/06,
A61K8/86

Language of the proceedings: EN

Title of invention:
HAIR TREATMENT COMPOSITION

Patent Proprietor:
Kao Germany GmbH

Opponents:
Henkel AG & Co. KGaA
L'Oréal

Headword:
Hair treatment composition/ KAO

Relevant legal provisions:
EPC Art. 56, 123(2)

Keyword:

Main request - Inventive step (No)

Auxiliary requests 1, 2, 3 and 6 - Extension of the subject-matter

Auxiliary request 4 - Prohibition of reformatio in peius

Auxiliary request 5 - Inventive step (No)

Decisions cited:

G 0009/92



Beschwerdekammern

Boards of Appeal

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Case Number: T 0835/19 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 12 May 2022

Party as of right:

(Opponent 1)

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Respondent:

(Patent Proprietor)

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Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
14 January 2019 concerning maintenance of the
European Patent No. 1570833 in amended form.**

Composition of the Board:

Chairman A. Usuelli
Members: D. Boulois
 Y. Podbielski

Summary of Facts and Submissions

- I. European patent No. 1 570 833 was granted on the basis of a set of 20 claims.
- II. An opposition was filed under Article 100 (a) and (b) EPC against the granted patent on the grounds that its subject-matter lacked novelty and inventive step and was not sufficiently disclosed.
- III. The appeal lies from the decision of the opposition division finding that the patent in amended form meets the requirements of the EPC. The decision was based on the claims as granted as main request and auxiliary request 1 filed with letter of 16 November 2017.

The subject-matter of claim 1 of auxiliary request 1 read as follows:

"1. Hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium
a- one or more surfactants as emulsifier,
b- one or more natural and/or mineral oil,
c- one or more silicone oil, and
d- at least one polyethyleneglycol with a molecular weight of more than 10,000 and is free of fatty alcohol,
whereby the composition has a viscosity of at least 100.000 mPa.s measured at 20°C with a Brookfield viscosimeter with Spindle F from Helipath Spindle Set at 10 rpm".

IV. The documents cited during the opposition proceedings included the following:

D1: WO01/00151 A1

D2: DE19740651 C1

D3: EP867167 A1

D4: WO98/04241

D5: WO2004/100906 A2

D6: WO97/14406

D7: Shin-Etsu Chemical Co. Ltd. KSG-210 Emulsifying Silicone Elastomer. KSG-210, 12 September 2012

D8: Dow. Polyox Water-Soluble Resins, pages 1-17

V. According to the decision under appeal, the main request was sufficiently disclosed with regard to the features "free of fatty alcohol" and "polyethylene glycol with a molecular weight of more than 10,000" in independent claim 1. The main request was not novel over D1, D2 and D5.

The subject-matter of auxiliary request 1 met the requirements of sufficiency, novelty and Article 123(2) EPC.

With regard to inventive step, D3, rather than D2 or D6, was the closest prior art, in view of the compositions A and B on page 4. D3 did not provide any guidance to include a polysilicone oil and PEG with a molecular weight of more than 10,000 in a composition for hair treatment/ hair styling. The objective technical problem was the improvement of hair properties in terms of especially soft texture, gloss, elasticity, flexibility, bounce, formability and thereby better compliance, as well as in gloss, softness and natural feeling when touching hair. The claimed solution was not obvious over D3, also in combination with D2 or D6.

When taking D2 or D6 as closest prior art, the claimed solution was also found to be inventive.

VI. Opponent 01 and opponent 02 (hereinafter the appellant) filed an appeal against said decision.

VII. With its statement of grounds of appeal dated 10 May 2019, opponent 01 submitted the following evidence:
A11: Vergleichsversuche der Einsprechenden 1

VIII. With a letter dated 11 October 2019, the patent proprietor (hereinafter the respondent) filed a main request and auxiliary requests 1-6 and submitted the following evidence, which had been filed as D9 and D10 during the opposition proceedings (letter of 7 September 2018):
A9: Page 522 of the Textbook "Grundlagen und Rezepturen der Kosmetika", 1989
A10: Comparative test report

The main request corresponded to auxiliary request 1 maintained by the opposition division.

The subject-matter of claim 1 of the auxiliary requests read as follows, the difference with respect to the main request being indicated in **bold**:

Auxiliary request 1

1. A hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium
a- one or more surfactants as emulsifier,
b- one or more natural and/or mineral oil,
c- one or more silicone oil, and

d- at least one polyethyleneglycol with a molecular weight of more than 10,000, and it is free of fatty alcohol,
whereby the composition has a viscosity of at least 100,000 mPa.s measured at 20°C with a Brookfield Viscosimeter with a spindle F Helipath Spindel set at 10 rpm **and it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition."**

Auxiliary request 2

"1. A hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium
a- one or more surfactants as emulsifier,
b- one or more natural and/or mineral oil,
c- one or more silicone oil, and
d- at least one polyethyleneglycol with a molecular weight of more than 10,000, and it is free of fatty alcohol,
whereby the composition has **a viscosity of at least 250,000 mPa.s** measured at 20°C with a Brookfield Viscosimeter with a spindle F Helipath Spindel set at 10 rpm **and it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition."**

Auxiliary request 3

"1. A hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium
a- one or more surfactants as emulsifier,
b- one or more natural and/or mineral oil,
c- one or more silicone oil, and

d- at least one polyethyleneglycol with a molecular weight of more than 10,000, and it is free of fatty alcohol,
whereby the composition has **a viscosity of at least 400,000 mPa.s** measured at 20°C with a Brookfield Viscosimeter with a spindle F Helipath Spindel set at 10 rpm and **it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition."**

Auxiliary request 4

"1. Hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium
a- one or more surfactants as emulsifier,
b- one or more natural and/or mineral oil,
c- one or more silicone oil, and
d- at least one polyethyleneglycol with a molecular weight of more than 10,000, and it is free of fatty alcohol,
whereby it is a microemulsion.

Auxiliary request 5

"1. Hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium
a- one or more surfactants as emulsifier,
b- one or more natural and/or mineral oil,
c- one or more silicone oil, and
d- at least one polyethyleneglycol with a molecular weight of more than 10,000, and it is free of fatty alcohol,
whereby it is a microemulsion and has a viscosity of at least 100.000 mPa.s measured at 20°C with a Brookfield

viscosimeter with Spindle F from Helipath Spindle Set at 10 rpm".

Auxiliary request 6

"1. Hair treatment composition in emulsion form characterized in that it comprises in a cosmetically acceptable aqueous medium

a- one or more surfactants as emulsifier,

b- one or more natural and/or mineral oil,

c- one or more silicone oil, and

d- at least one polyethyleneglycol with a molecular weight of more than 10,000, and it is free of fatty alcohol,

whereby it is a microemulsion and has a viscosity of at least 100.000 mPa.s measured at 20°C with a Brookfield viscosimeter with Spindle F from Helipath Spindle Set at 10 rpm and **it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition."**

- IX. With a letter dated 25 February 2021, opponent 01 (hereinafter party as of right) withdrew its appeal.
- X. A communication from the Board, dated 16 December 2021, was sent to the parties. In this communication, the Board took the choice of D2 as closest prior art and saw the technical problem over D2 as the provision of an alternative composition.
- XI. A first oral proceedings, which was interrupted due to a medical emergency, took place on 15 March 2022 by videoconference. A second oral proceedings was held on 12 May 2022, also by videoconference.

XII. The arguments of the appellant and of the party as of right may be summarised as follows:

Main request - Inventive step

According to the appellant, D2 was the closest prior art, and its example 11 disclosed a pomade, which was a cosmetic composition with high viscosity. The party as of right also considered D3 and D6 as possible alternative closest prior art, but specified that D2 was closer in terms of features in common with the claimed subject-matter. The unique distinguishing feature between the claimed subject-matter and D2 was the viscosity value, which was not given in example 11. There was no technical effect shown for the distinguishing feature and the problem had to be defined as the provision of an alternative hair composition in terms of softness, gloss and formability; the party as of right saw the problem as the provision of a composition with a consistency adapted to the use of the composition. The solution was obvious in view of D2, which suggested to adapt the viscosity to the function of the composition (see D2, page 2, l. 32-33).

Auxiliary request 1, 2, 3 ,6 - Amendments

The description on page 8 could not constitute the basis for amended claim 1, since it referred to "one or more oil and/or mineral oil" rather than to components b) and c).

Auxiliary request 5 - Inventive step

The arguments were the same as for the main request. There was no effect shown, no advantage and it remained a simple alternative.

XIII. The arguments of the respondent may be summarised as follows:

Main request - Inventive step

The problem addressed in the opposed patent was the improvement of hair properties in terms of softness, gloss, elasticity, flexibility, bounce and formability. Since the compositions disclosed in D3 were emulsion compositions having high viscosity and having most of the compounds in common as required by the claims and aiming at the same / similar improvements on hair, D3 was seen as the closest state of the art.

D2 disclosed hair treatment composition with relatively low viscosity. Example 11 comprised the claim relevant compounds but did not disclose the viscosity value required by the claim. The viscosity values reported in Table 1 of D2 presented a viscosity increase limited to 4572 mPa.s. Moreover the compositions disclosed in D2, in particular in example 11, were not an emulsion, since a pomade was not necessarily an emulsion. The effect linked to the distinguishing features, namely the emulsion state and the claimed viscosity, was an improvement in shine and combability of the hair, as shown by document D10. The problem was the provision of a composition with the same properties of shine, formability, softness and a high viscosity. The solution was the composition of claim 1. There was no hint in D2 in particular to increase the viscosity to the claimed value.

Auxiliary request 1, 2, 3, 6 - Amendments

A basis for the amendment of claim 1 could be found in the combination of claim 12 with page 8, first paragraph, of the application as filed.

Auxiliary request 4 - Prohibition of *Reformatio in peius*

The respondent did not make any submission on this point.

Auxiliary request 5 - Inventive step

D2 did not mention which type of emulsion was formed by the compositions disclosed therein. The claimed subject-matter was therefore not obvious.

XIV. Requests

The appellant (opponent 2) and the party as of right (opponent 1) requested that the decision under appeal be set aside and the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed and the patent be maintained on the basis of the request held allowable by the opposition division (main request), or that the patent be maintained on the basis of one auxiliary requests 1-6 filed with letter dated 11 October 2019.

Reasons for the Decision

1. Main request - Inventive step

1.1 The claimed invention relates to a hair treatment composition in the form of an emulsion free of fatty alcohol, comprising in particular one or more surfactant, one or more natural or mineral oil, one or more silicone oil and at least one polyethylene glycol with a molecular weight of more than 10.000.

1.2 The appellant considers D2 to be the closest prior art, in view of example 11. The party as of right to the proceedings considers also document D2, rather than D3 and D6 as possible closest prior art, while D3 was the choice of the opposition division in its decision and of the respondent in its reply to the statement of grounds of appeal.

1.2.1 Example 11 of document D2 shows the following pomade composition:

- i) 71 g 1% Structure® 2001 in water, with a base for pH7
- ii) 3.0 Kamol® ID (isododecane)
- iii) 10.0 g Castor oil PEG 25
- iv) 1.0 g PEG® 14000
- v) 2.0 g Emulgin® L (PPG-1-PEG-9-Laurylglycol ether)
- vi) 10.0 g glycerin
- vii) 3.0 Dow Corning Q2-1403.

This composition is free of fatty alcohol, comprises one or more surfactants (component v), a mineral oil (component ii), a silicone oil (component vii), a polyethylene glycol with a molecular weight more than 10.000 (component iv). The viscosity value is however not given for the composition of example 11.

In view of the components present in example 11, the Board is also convinced that this composition forms an emulsion, contrary to the argument of the respondent. The composition disclosed in example 11 comprises indeed an aqueous phase (components i and vi), a least one non-ionic surfactant (component v) and an oil phase, namely isododecane and a silicone (components ii and vii); such composition forms an emulsion, as directly confirmed by the statement on page 2, lines 31-34 of D2, specifying that the compositions disclosed in D2 are characterized in particular by the fact of forming stable emulsions with water-insoluble substances such as hydrocarbons or silicone oils. This is the case of example 11, which contains isododecane and of the product Dow Corning Q2-1403.

Even if the viscosity value is not given for the pomade of example 11, D2 mentions that the combination of the three main components of the hair treatment composition disclosed therein, namely a PEG, a non-ionic surfactant and an ethylenic polymer (Structure 2001® in example 11) results in an unexpectedly strong, synergistic increase in the viscosity and in the emulsifying ability of the system, which cannot be achieved with the individual substances (see page 2, lines 15-31). Such increase in viscosity is generally illustrated in Tables 1-4 of D2, which discloses combinations consisting of the polymer, PEG and a non-ionic surfactant, and can amount up to 4572 mPa.s (see Table 2). The results shown in these Tables are however not directly linked with the examples of D2 which comprise further components or components of the same category but at different concentrations, and cannot therefore serve to evaluate the viscosity of the examples.

D2 mentions finally that the rheological behavior of the hair care product can be adjusted by varying the content of the above-mentioned ingredients. In this manner it is possible to obtain a product having the rheological behavior of a pomade, a cream, a wax or a gel (page 2, lines 31-34).

- 1.2.2 D3 discloses two compositions A and B which are stored separately and mixed together before use in a 1:1 ratio (see D3, page 4, lines 1-11). The viscosity before the mixing of each composition A and B is respectively around 100.000 and 600.000 mPa.s, while said viscosity drops to under 1.500 mPa.s when mixed together (see D3, page 2, lines 12-24 or claim 1). None of the compositions A or B comprises a polyethyleneglycol. In view of this disclosure, it appears that document D3 is more remote than D2 from the claimed subject-matter.
- 1.2.3 D6 discloses in examples I-V hair conditioning compositions comprising fatty alcohols, PEG with an undefined molecular weight comprised between 1.500 to 25.000 (see page 21, line 33 to page 22, line 8), and with a final viscosity of 2.000 to 9.000 centistokes at 25°C, which is less than the claimed 100.000 mPa.s.
- 1.2.4 Consequently, document D2 presents the greatest number of features in common with the claimed invention and represents the closest prior art.
- 1.3 According to the appellant, the problem is the provision of an alternative composition for the hair treatment offering good properties in terms of softness, gloss and formability.

The party as of right to the proceedings mentioned that the problem is the provision of a composition the

consistency of which has been adapted to a desired form of application.

According to the respondent, the problem is the provision of a composition maintaining the same properties of shine, softness, touch feeling, formability, volume, and having a high viscosity.

- 1.4 The solution to any of these problems, is a composition characterised by a viscosity of at least 100.000 mPa.s measured at 20°C with a Brookfield viscosimeter with Spindle F from Helipath Spindle Set at 10 rpm.
- 1.5 The respondent relied on the comparative test report A10 in support of the existence of a technical effect.

A10 provides a comparison between a composition according to the invention (Composition A) versus a composition excluding the presence of silicone oil and PEG (Composition B). However, these comparative tests neither compare the compositions of claim 1 with the one of example 11 of D2, nor give any indication with regard to the viscosities of the compositions. Hence, these tests are not suitable to demonstrate any technical advantages of the claimed composition vis-à-vis the closest state of the art.

The contested patent does not give any further indication as to any possible effect linked with a viscosity of at least 100,000 Mpa.s. The sole disclosure regarding the viscosity is given in paragraph [0064]. However this passage does not attribute any particular importance to this parameter.

This is confirmed by the examples of the contested patent. Indeed, the contested patent gives a comparison

between a composition according to the invention disclosed in example 1 having a viscosity of 1,200,000 mPa.s and a comparative composition disclosed in example 2 without silicone and having a viscosity of 1,400,000 mPa; example 3 of the patent makes a comparison between a composition according to the invention and a composition without any PEG and silicone while example 4 compares a composition according to the invention with a composition without PEG or silicone. Hence, the patent does also not provide any experiments which could demonstrate any technical advantages linked with the claimed viscosity value of at least 100,000 mPa.s.

In the absence of any shown technical effect linked with a viscosity of at least 100,000 mPa.s, the problem is as defined by the appellant, i.e. the provision of an alternative composition.

- 1.6 Considering that the problem to be solved has been defined as the provision of an alternative, the mere fact of setting the viscosity above a given value without obtaining any particular effect is an activity devoid of any inventive character.

Indeed in the Board's view, the adaptation or adjustment of the viscosity of a cosmetic composition is a routine activity for the person skilled in the art. For this reason alone, the claimed solution cannot be inventive over the closest prior art D2.

Moreover, in the present case, the composition of example 11 of D2 is a pomade, which is expected to have already a high viscosity. Furthermore, D2 explains that the rheological behaviour of the compositions disclosed therein can be adapted by the modification of the

components of the composition to the desired form, namely a pomade, a cream, a wax or a gel (see D2, page 2, lines 31-34). As highlighted by the party as of right, D2 suggests furthermore the incorporation of polymers with thickening effects which have such effect on the rheology.

1.7 Consequently, the claimed solution is obvious and the main request does not meet the requirements of Article 56 EPC.

2. Auxiliary request 1 - Amendments

2.1 The subject-matter of claim 1 of auxiliary request has been amended by the introduction of the feature **"it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition"**.

2.2 According to the respondent, a basis for this feature can be found in claim 12 and on page 8, lines 2-10 of the original description.

The cited passage of the description discloses the following:

"Hair treatment composition of the present invention comprises one or more oil and/or mineral oil at a concentration of 1% to 35%, preferably 1 to 30% and most preferably 5 to 25% by weight calculated to total composition."

The following sentences of this passage list the suitable natural oils and mineral oils which can be comprised at these concentrations.

Said passage does however not make any reference to silicone oil, which constitutes the component (c) mentioned in the amended feature. The silicone oil is mentioned further on page 8 in a distinct paragraph and passage as "the fourth essential part of the hair treatment composition".

Accordingly, there is no basis in the passage on page 8 for the total oil components, namely the sum of components b, one or more natural and/or mineral oil, and c, one or more silicone oil, at a concentration of 5 to 35% by weight. This passage is indeed only directed to the concentration of the component b, one or more natural and/or mineral oil.

2.3 The original claims do neither provide a basis for the amended feature of claim 1. Original dependent claim 12 reads indeed:

"Hair treatment composition according to any of the preceding claims characterized in that it comprises oil components (sum of the components b and c of claim 1) at a concentration of 1 to 35% by weight, calculated to total composition.".

This disclosure does not refer to the lower range limit of 5% and for this reason, cannot be seen as a basis for the amended feature of claim 1.

2.4 Consequently, the feature "**it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition**" is not derivable directly and unambiguously from the original application and auxiliary request 1 does not meet the requirements of Article 123(2) EPC for this reason.

3. Auxiliary requests 2, 3 and 6 - Amendments

The subject-matter of claim 1 of all these request also comprises the feature **"it comprises oil components (sum of components b and c) at a concentration of 5 to 35% by weight, calculated to the total of the composition"** present in claim 1 of auxiliary request 1 for which no basis was found in the original application.

Auxiliary requests 2, 3 and 6 do not meet the requirements of Article 123(2) EPC for the same reasons as auxiliary request 1.

4. Auxiliary request 4 - Prohibition of Reformatio in peius

4.1 In claim 1 of auxiliary request 4, the feature "whereby the composition has a viscosity of at least 100.000 mPa.s measured at 20°C with a Brookfield viscosimeter with Spindle F from Helipath Spindle Set at 10 rpm" present in the request maintained by the opposition division was deleted and the feature originating from dependent claim 2 was incorporated in claim 1, namely "whereby it is a microemulsion". Accordingly, the scope of claim 1 of auxiliary request 4 is at least partially broader than the scope of the main request as maintained by the opposition division, since it is no longer restricted by its viscosity.

4.2 In the present case, the only appellant is opponent 02. If an opponent is the sole appellant against an interlocutory decision by an opposition division maintaining the patent in amended form, the patent proprietor as respondent is primarily restricted in the appeal proceedings to defending the patent as thus maintained in order to comply with the principle of the

prohibition of *reformatio in peius* (see G 9/92, OJ EPO 1994, 875). Consequently, the proprietor as respondent is barred from returning to the patent as granted, to higher ranking unsuccessful requests, or to requests with a broadened scope.

Since the amendments leading to claim 1 of auxiliary request 4 broaden the scope of claim 1 as maintained by the opposition division, this request contravenes the principle of the prohibition of *reformatio in peius*. Consequently, this auxiliary request has to be rejected.

5. Auxiliary request 5 - Inventive step

In comparison to the main request, claim 1 of this request has been amended by the feature "**whereby it is a microemulsion**", which constitutes a further distinguishing feature with regard to the disclosure of example 11 of D2.

The description of the contested patent does not give any indication as to a possible effect linked with the composition being a microemulsion, the only relevant disclosure on that point being in paragraph [0009] where it is stated that the microemulsion can be non-transparent, semi-transparent or have a transparent appearance, which covers the whole possible palette of light scattering. The description of the patent does neither indicate whether the compositions of the examples are in the form of microemulsions.

Accordingly, it is not possible to conclude that this feature is linked with any particular property or effect, and the problem remains the provision of an alternative hair treatment composition.

The selection of a microemulsion as the form of the claimed composition is considered to be part of the routine tasks of the person skilled in the art, since this form of composition is generally known. In the absence of any technical prejudice or particular effect, the indication that the composition of claim 1 is in form of a microemulsion is devoid of any inventive character.

Consequently, the claimed subject-matter is obvious over the closest prior art D2 and auxiliary request 5 does not meet the requirements of Article 56 EPC.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The patent is revoked.

The Registrar:

The Chairman:



B. Atienza Vivancos

A. Usuelli

Decision electronically authenticated