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**Datasheet for the decision
of 6 May 2019**

Case Number: T 1075/17 - 3.3.07

Application Number: 09778268.4

Publication Number: 2320861

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A61K8/895, A61Q5/02, A61Q5/12

Language of the proceedings: EN

Title of invention:
CONDITIONING COMPOSITION FOR HAIR

Applicant:
Kao Germany GmbH

Headword:
CONDITIONING COMPOSITION FOR HAIR/Kao Germany GmbH

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:



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Boards of Appeal
Chambres de recours

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Case Number: T 1075/17 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 6 May 2019

Appellant: Kao Germany GmbH
(Applicant) Pfungstädter Strasse 92-100
64297 Darmstadt (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 18 November
2016 refusing European patent application No.
09778268.4 pursuant to Article 97(2) EPC.

Composition of the Board:

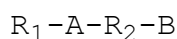
Chairman J. Riolo
Members: D. Boulois
P. Schmitz

Summary of Facts and Submissions

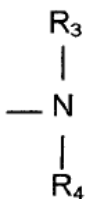
I. The appeal lies from the decision of the examining division to refuse European patent application n°09778268.4. The decision was based on 2 sets of claims filed during the oral proceedings before the examining division on 27 October 2016 as main request and auxiliary request 1.

Claim 1 of the main request read:

"1. Aqueous conditioning composition for hair characterized in that, it comprises at least one compound according to general structure



wherein R_1 is a saturated or unsaturated, straight or branched alkyl group with 8 to 24 C atoms, R_2 is a straight or branched alkyl group with 1 to 4 C atoms, A is O, and B is



wherein R_3 and R_4 are the same or different is H or an alkyl with 1 to 4 C atoms, hydroxyl alkyl with 1 to 4 C atoms and di hydroxyl alkyl with 2 to 4 C atoms, and an aqueous emulsion of divinyl dimethicone/ dimethicone copolymer with an internal phase viscosity of more than 1×10^8 mm²/s measured at 0.01 Hz at 25°C."

II. The following documents were considered during the examination proceedings:

D4: EP 1 283 030

D10: WO 03/035017

E1: Experimental data filed with letter of 24.1.2012

E2: Experimental data filed with letter of 13.1.2015

E3: Experimental data filed with letter of 10.10.2016

III. According to the decision under appeal, D10 was considered as the closest prior art as regards inventive step. D10 disclosed compositions containing the DC HMW 2220 silicone emulsion and behenyl trimethyl ammonium chloride. The subject-matter of claim 1 differed in the presence of an alkyl ether alkyl amine compound. In view of the experimental data E1, E2 and E3, the problem was seen as the provision of hair conditioning compositions providing improved hair properties such as smoothness, elasticity, volume and shine. D4 disclosed conditioning compositions with good suppleness and smoothness of the hair. These effects were obtained by using a specific ether type tertiary amine as claimed in the main request. Although D4 did not mention the shine and elasticity, the claimed solution was considered obvious in view of its disclosure. Claim 1 of the main request was therefore not inventive over D10 combined with the teaching of D4.

Auxiliary request 1 was found to lack inventive step for the same reason.

IV. The applicant (hereinafter the appellant) filed an appeal against the examining division's decision. With the statement of grounds of appeal dated 20 March 2017,

the appellant filed a main request and an auxiliary request corresponding to the requests on file in the examination proceedings.

V. A communication expressing the board's preliminary opinion was sent to the appellant.

VI. With a letter dated 11 April 2019, the appellant submitted new evidence:

D11: "Suppleness - Smoothness and Softness in Focus"

D12: Midlady's Standard Textbook of Cosmetology, Thomson Learning, Albany, NY - USA, page 58.

VII. Oral proceedings before the board of appeal took place on 6 May 2019.

VIII. The arguments of the appellant can be summarized as follows:

D10 was the closest state of the art, and the difference was the alkyl ether alkyl amine compound.

The data and the statistical analysis of the data E3 clearly showed that the hair properties shine, volume and elasticity were significantly improved whereas the smoothness and combability were not changed at all.

The objective technical problem over the closest state of the art D10 was seen in "providing a composition for enhancing, elasticity, volume and shine of hair".

The solution was to use the alkyl ether alkyl amine compounds in combination with the silicone polymer of the claims.

The solution of the above problem was not obvious in the light of D4. D4 disclosed compositions comprising alkyl ether alkyl amine compound for conditioning hair in terms of improving suppleness and smoothness of both wet and dry hair. Document D4 did not relate to improving hair elasticity, hair volume and hair shine, but mentioned only hair suppleness and hair luster. The hair properties of suppleness and elasticity were two distinct properties, as it was shown in D11 and D12. Hair with good suppleness and luster was not necessarily hair having good elasticity and shine and, the other way around, hair having good elasticity and shine was not necessarily hair with good suppleness and luster.

The effect shown with the comparative tests was unexpected and was not obvious from the teaching of D4. Thus, the claims of the main request involved an inventive step.

IX. Requests

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 of the main request or auxiliary request 1 filed with the statement setting out the grounds of appeal dated 20 March 2017.

Reasons for the Decision

Main request - Inventive step

1. The present invention relates to conditioning compositions for hair.

2. D10 discloses hair conditioning compositions comprising a vinyltrimethicone/dimethicone copolymer and a further conditioning agent, such as a cationic surfactant; D10 discloses compositions containing the DC HMW 2230 silicone emulsion and behenyl ammonium chloride, but does not disclose the presence of an alkyl ether alkyl amine compound as claimed in claim 1 of the main request. This document was considered as closest prior art by the examining division in its decision.

D4 discloses hair conditioning compositions comprising an alkyl ether alkyl amine as claimed in claim 1 of the main request (see claim 1 or Table 1). Comparative examples of D4 show that compositions containing hexadecyl oxypropyl dimethylamine provide superior conditioning effects in terms of smoothness, suppleness of wet hair and smoothness and suppleness of dry hair (see Table 2). Table 6 of D4 mentions also that compositions comprising such alkyl ether alkyl amine provided hair which were excellent in luster after drying.

3. According to the appellant, a composition comprising a vinyltrimethicone/dimethicone copolymer and an alkyl ether alkyl amine provides superior performance in terms of elasticity, volume and shine of the dry hair, whereas the smoothness and combability of the hair were not changed.
4. Experimental data E1-E3 have been filed by the appellant to demonstrate the existence of an effect.
 - 4.1 E1 compares the composition according to the invention of example 7 of the application, comprising a vinyltrimethicone/dimethicone copolymer and stearyloxypropyldimethylamine to a comparative

composition comprising a vinyl dimethicone/dimethicone copolymer and behentrimonium chloride. The comparisons show an improved effect on smoothness on the wet hair and smoothness, elasticity, volume and shine on the dry hair. Combability and greasiness on the wet hair and combability of the dry hair was nevertheless not improved.

4.2 E2 compares a composition according to the invention and comprising a vinyl dimethicone/dimethicone copolymer and stearyloxypropyldimethylamine to a composition comprising a vinyl dimethicone/dimethicone copolymer and steartrimonium chloride. The results of E1 were confirmed by this document, as regards smoothness, elasticity, volume and shine of the dry hair. Combability of the dry hair was nevertheless not improved.

4.3 E3 shows the individual data and the result of the statistical evaluation of the experiments E1 and E2. E3 shows that the results were statistically significant as to the improvement shown on volume, elasticity and shine of the dry hair, but not as regards the smoothness and combability of the dry hair.

4.4 In view of the experimental results shown in E3, the Board is convinced that the problem to be solved is as defined by the appellant, namely the provision of a composition having superior performance in terms of elasticity, volume and shine of the dry hair, whereas the smoothness and combability of the hair were not changed.

5. The question remaining is whether the skilled person, starting from the teaching of D10, would arrive at the

subject-matter of claim 1 of the main request in an obvious manner in order to solve the problem posed.

- 5.1 D4 shows qualitatively in Table 2 that hair conditioning compositions comprising specific alkyl ether alkyl amines (amines 1-4 of Table 1) have a superior effect to compositions comprising cetyltrimethylammonium chloride or even stearyloxypropylamine as regards suppleness and smoothness of dry hair.

Table 6 of D4 mentions that hair compositions comprising alkyl ether alkyl amines provide an excellent effect on hair as regards suppleness, smoothness and luster after drying. D4 does not make any mention of an effect as to the hair volume.

Hence, an effect linked with the use of alkyl ether alkyl amines as to an improvement on elasticity, volume and shine of the dry hair is not shown or is not predictable in view of the disclosure of D4, without further quantitative or qualitative evidence.

- 5.2 Moreover, the hair properties of suppleness as mentioned in D4 and elasticity as mentioned in the present patent application are two distinct properties of hair and are not (cor)related with each other, as also shown by the definitions given in D11 and D12. The Board is in particular convinced by the appellant's arguments that elasticity and volume of the hair are different properties than smoothness and suppleness of the hair.

- 5.3 Hence an effect as to the elasticity, volume and shine of the dry hair cannot be expected or predicted from the document D4. Consequently, the effect shown with

the comparative tests is unexpected and is not obvious from the teaching of D10 combined with D4.

6. Thus, the subject-matter of the claims of the main request involves an inventive step.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent on the basis of the set of claims of the main request and a description to be adapted thereto.

The Registrar:

The Chairman:



B. Atienza Vivancos

J. Riolo

Decision electronically authenticated