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**Datasheet for the decision
of 6 May 2020**

Case Number: T 1545/18 - 3.3.07

Application Number: 10795245.9

Publication Number: 2512436

IPC: A61K8/898, 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. 54, 56

Keyword:
Main request (former auxiliary request) - Novel and inventive



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Case Number: T 1545/18 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 6 May 2020

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

Representative: Grit, Mustafa
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 9 January 2018
refusing European patent application No.
10795245.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse European patent application n° 10 795 245.9. The decision was based on the claims of the main request and auxiliary request 1, both filed on 26 September 2017, and auxiliary request 2 filed during the oral proceedings on 5 December 2017.

Claim 1 of auxiliary request 2 read as follows:

"1. Aqueous conditioning composition for hair characterized in that it comprises silicone quaternium-22 and at least one additional silicone compound which is different from the former one selected from arylated silicones."

- II. The documents cited during the examination proceedings included the following:

D1: Herrwert S. et al.: "Silicone Quaternium-22: New silicone technology for premium hair conditioning with additional benefits", SOFW-JOURNAL Seifen, Oele, Fette, Wachse, vol. 135, no. 6, 1 June 2009 (2009-06-01), pages 11-12, 14, XP002584466,

D3: EP 2 022 478 A1

D10: WO 2011/009712 A2

STIN-1: comparative data filed with letter of 7 January 2015

STIN-2: comparative data filed with letter of 26 September 2017

III. According to the decision under appeal, D10 was prejudicial to the novelty of claim 1 of the main request and of auxiliary request 1.

As regards auxiliary request 2, D3 was considered to be the closest prior art and disclosed compositions comprising at least one arylated silicone and one silicone quaternary compound. The subject-matter of claim 1 of auxiliary request 2 differed from examples 2, 9 and 10 of D3 in that silicone quaternium-22 was used. The comparative data in STIN-1 and STIN-2 did not represent a comparison with these examples of D3, and the problem was thus the provision of alternative aqueous conditioning compositions based on arylated silicones. The solution was obvious in view of D1.

IV. The applicant (hereinafter the appellant) filed an appeal against said decision. With the statement setting out the grounds of appeal received on 18 May 2018, the appellant submitted a main request and an auxiliary request (headed "auxiliary request 1"), and filed following documents:

D12: comparative test report 01

D13: comparative tests reports 02.

The subject-matter of claim 1 of the auxiliary request was identical to claim 1 of auxiliary request 2 filed during the oral proceedings before the examining division.

V. With its communication sent in preparation for oral proceedings, the Board expressed a negative preliminary view with respect to novelty of the main request and inventive step of the auxiliary request. As regards inventive step, the Board noted in particular that the

tests D13 provided with the statement of grounds of appeal did not meet the necessary minimal standard level for experiments based on the assessment of subjective hair properties and, for this reason, the problem remained the provision of an alternative composition, which appeared to be obvious in view of D1.

- VI. With the letter received on 26 February 2020, the appellant submitted complementary data to the experiments D12 and D13.
- VII. In a second communication, the Board pointed out mistakes and inconsistencies in the newly provided data for the experiments D13, and, for this reason, the Board confirmed its preliminary opinion as to the absence of an inventive step.
- VIII. With a letter dated 28 April 2020, the appellant withdrew the main request, so that the auxiliary request became the new main request, and filed corrected experimental data concerning D12 and D13.
- IX. Oral proceedings were cancelled.
- X. The appellant's written arguments can be summarised as follows:

As regards inventive step, the examining division had taken D3 as the closest state of the art. The difference between D3 and claim 1 of the main request was that the claimed composition comprised silicone quaternium-22.

Moreover, the provided comparative tests clearly demonstrated that the effect of an arylated silicone -

phenyltrimethicone - and silicone quaternium - 22 was synergistic in improving volume and body.

Based on the results presented in the comparative test reports, the objective problem over the closest state of the art had to be seen in "providing a composition for improving volume and body of hair".

The solution was a composition according to claim 1 of the main request.

The solution was not obvious in the light of D1. The appellant further submitted that D3 did not provide any information on silicone quaternium-22.

- XI. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the set of claims of the main request filed as the auxiliary request with the statement setting out the grounds of appeal.

Reasons for the Decision

1. Main request - Novelty

D10 discloses composition comprising quaternium-22, but not in combination with an aryl silicone. Consequently, claim 1 of the main request is novel (Article 54(3) EPC).

2. Main request - Inventive step

- 2.1 The invention relates to aqueous conditioning compositions for hair comprising quaternium-22 and an arylated silicone.

2.2 D3 is considered to be the closest prior art.

D3 discloses a composition comprising an arylated silicone and a quaternary silicone compound selected from silicone-quaternium 1 to silicone-quaternium 21 (see claim 1). Examples 2, 9 and 10 were considered as particularly relevant by the examining division, since they contain a quaternary silicone with multiple quaternary groups, namely silicone-quaternium 18, in combination with trimethyl pentaphenyl trisiloxane.

This document does not disclose the presence of silicone-quaternium 22.

2.3 According to the appellant, the problem is the provision of a conditioning composition for improving volume and body of hair.

2.4 Comparative experiments D12 and D13 were filed by the appellant to demonstrate the existence of an effect on volume and body of hair.

D12 is an experiment showing the synergistic effects of a composition comprising silicone-quaternium 22 and phenyl trimethicone compared to compositions comprising only silicone quaternium 22 or phenyl trimethicone. Said tests do however not provide a comparison with a composition as disclosed in D3.

D13 provides a first comparison between a composition according to example 2 of D3 and a composition according to the invention, namely comprising 0.2 wt% of silicone quaternium- 22 instead of silicone quaternium-18. Said comparison provides the final result as regards volume and body, with the total score

obtained on 30 hair samples and with an average score determined by the Board:

	Comparative total score	Comparative average	Invention total score	Invention average score
Volume	96	3.2	124	4.1
Body	86	2.9	116	3.8

A second comparison was made in D13 between a composition according to example 10 of D3 as the comparative composition, but with 0.2 wt% of silicone quaternium-18 instead of 0.1 wt%, and a composition comprising 0.2 wt% of silicone quaternium- 22:

	Comparative total score	Comparative average	Invention total score	Invention average score
Volume	72	2.4	112	3.7
Body	92	3.1	124	4.1

Moreover, the complementary data provided with letter dated 28 April 2020 gives all the individual notations obtained in the experiments of D12 and D13 and provides also a statistical analysis of the results. For all of the comparative test results the differences were found to be statistically significant and, therefore, the conclusion can be drawn from these tests that an additional effect of enhancing body and volume at the same time is achieved.

2.5 Consequently the experiments D13 are conclusive and the problem to be solved is as it was defined by the appellant, namely the provision of a conditioning composition for improving volume and body of hair. The solution is the combination of quaternium-22 and an arylated silicone.

This solution is not obvious. D3 does not suggest the addition of quaternium-22 in order to improve the volume and body of hair.

D1 relates to the conditioning properties of quaternium-22 in association with cationic products, such as cationic guar gum and cetrimonium chloride (see Figures 5 and 7). This document does not suggest or envisage the association of quaternium-22 with a non-cationic product, such as an arylated silicone.

2.6 The claimed solution is therefore not obvious and the main request meets the requirements of Article 56 EPC.

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 main request filed as the auxiliary request with the statement setting out the grounds of appeal.

The Registrar:

The Chairman:



B. Atienza Vivancos

A. Uselli

Decision electronically authenticated