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**Datasheet for the decision
of 6 February 2025**

Case Number: T 2554/22 - 3.3.10

Application Number: 16155391.2

Publication Number: 3058937

IPC: A61K8/86, A61K8/898, A61K8/81,
A61K8/73, A61Q5/06

Language of the proceedings: EN

Title of invention:

COMPOSITION FOR FORMING A FILM ON KERATIN FIBRES

Patent Proprietor:

Noxell Corporation

Opponent:

Henkel AG & Co. KGaA

Headword:

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

Novelty - (yes)
Inventive step - (yes) - choice of the document representing
the closest state of the art

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 2554/22 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 6 February 2025

Appellant: Henkel AG & Co. KGaA
(Opponent) Henkelstrasse 67
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Representative: Henkel AG & Co. KGaA
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Respondent: Noxell Corporation
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Representative: Zimmermann & Partner
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 November 2022
rejecting the opposition filed against European
patent No. 3058937 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman P. Gryczka
Members: M. Kollmannsberger
L. Basterreix

Summary of Facts and Submissions

- I. The opponent appealed the Opposition Division's decision to reject its opposition against the patent pursuant to Article 101(2) EPC.
- II. The opposition against the grant of the patent was based on Article 100(a) EPC, namely lack of novelty and inventive step (Articles 54 and 56 EPC). The Opposition Division concluded in its decision that these objections were unfounded. The compositions defined in the patent claims were novel over document D1 and their provision involved an inventive step over document D7 as document representing the closest state of the art. Thus, the opposition was rejected.
- III. Claim 1 of the patent as granted reads as follows:
- "A composition for providing a film on keratin fibres, the composition comprising:*
- (a) an aminosilicone polymer, wherein the aminosilicone polymer comprises amino sidechains, and wherein the aminosilicone polymer has a weight average molecular weight of from 10,000 Dalton to 60,000 Dalton;*
 - (b) a silicone resin wherein the silicone resin is an MQ resin;*
 - (c) an ether of a water-soluble polyhydric alcohol;*
 - (d) a thickening system comprising:*
 - a deposition enhancer, wherein the deposition enhancer is a hydrophilic and non-ionic polymer, and wherein the deposition enhancer has a weight*

average molecular weight of at least 300,000 Dalton to 7,500,000 Dalton;

◦ a thickening polymer, wherein the thickening polymer has a weight average molecular weight of at least 10,000 Dalton, and wherein the thickening polymer is a cationic thickening polymer or is a non-ionic thickening polymer;

(e) one or more coloured materials or one or more pigments;

(f) water;

(g) 2-phenoxyethanol and/or phenylmethanol;

wherein the composition is substantially free of esters of parahydroxybenzoic acids;

and wherein the composition is substantially free of isothiazolinone compounds."

IV. The following documents are referred to in this decision:

D1: WO2011/059696 A2

D2: Wacker-Belsil[®] ADM 652, ADM 656, ADM 1100, ADM 1600, ADM 1650; data sheet

D6: WO2013/085577 A2

D7: FR 2 958 544 A1

V. The appellant submitted that the Opposition Division's novelty assessment over D1 was erroneous. Regarding inventive step the appellant submitted that the claimed compositions were obvious over D1. Although admittedly D7 was a possible starting point for an inventive step analysis, a skilled person could have likewise started from D1. D1 was directed to a similar purpose and was

closer than D7 in terms of technical features of claim 1.

VI. The respondent defended the decision of the Opposition Division. D1 was not novelty destroying. Furthermore, a skilled person would not have taken D1 as a starting point when trying to solve the technical problem mentioned in the description. Even if nevertheless D1 was taken as a starting point a skilled person would not have arrived at the compositions defined in the claims in an obvious way.

VII. Oral proceedings were held on 6 February 2025.

VIII. The parties' requests were the following:

The appellant (opponent) requested the appealed decision to be set aside and the patent to be revoked.

The respondent (patent proprietor) requested the appeal to be dismissed. As an auxiliary request the respondent requested the maintenance of the patent in amended form based on one of auxiliary requests 1-13, filed together with the reply to the appellant's statement setting out the grounds of appeal.

IX. The Board's decision was announced at the end of the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. Novelty (Article 54 EPC)

2.1 The novelty objection is based on example 4 of D1.

The Opposition Division acknowledged novelty of granted claim 1 over this example i. a. due to feature (a), requiring an aminosilicone with amino side chains and a weight average molecular weight between 10 and 60 kDa.

2.2 The Board agrees.

The composition of example 4 of D1 contains two different aminosilicones, "aminosilicone 1" and "aminosilicone 2".

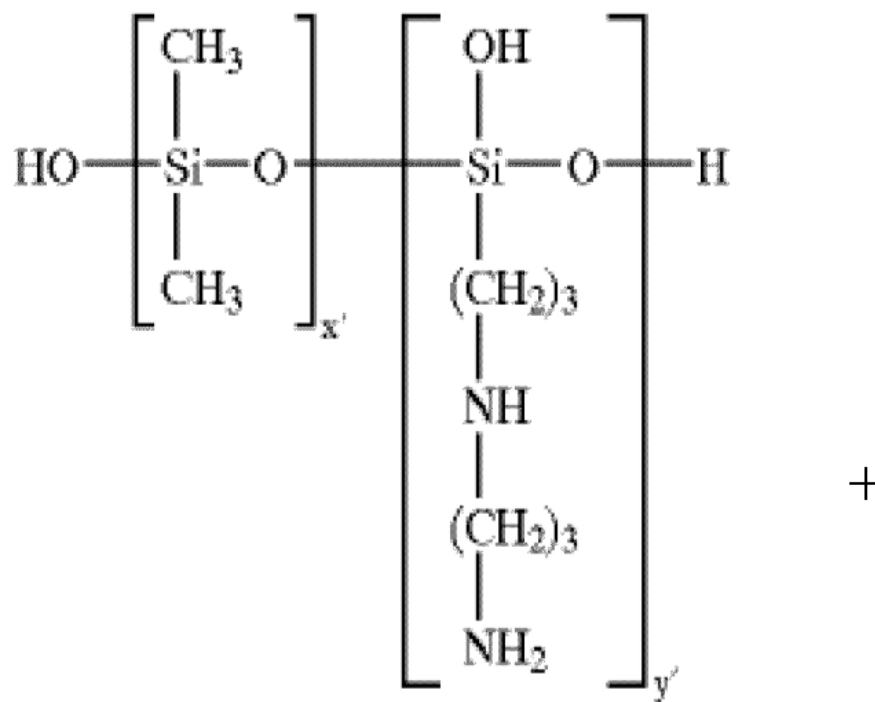
"Aminosilicone 1" has a structural formula depicted in footnote 4 below the table. From this formula it is apparent that "Aminosilicone 1" is a linear polydimethylsiloxane with two terminal aminopropyl groups. This does not read on an aminosilicone polymer comprising amino side chains as required by the claim, since, being a linear polysiloxane, there are no side chains. The aminopropyl groups are the end groups of the main chain.

"Aminosilicone 2" is product "ADM1000" from Wacker Silicone, see footnote 6. This product is one of the polymers listed in the data sheet D2. D2 shows a structural formula from which it is clear that "Aminosilicone 2" is an aminosilicone with amino side chains, however, there is no information about the average molecular weight of this polymer.

Thus, claim 1 of the granted patent is novel over example 4 of D1 already due to feature (a).

2.3 The appellant submitted that according to the structural formula in paragraph [0038] of the patent, also terminal aminosilicones, such as "aminosilicone 1", were aminosilicones according to feature (a) of claim 1. Depending on the choice of the parameters x' and y' a terminal aminosilicone might result, in particular when defining $y'=1$.

The structure depicted in paragraph [0038] is the following:



A choice of $y'=1$ in this formula admittedly results in a silicone with a terminal amino group.

However, the structural formula does not stand alone, it is embedded in a context. In the introductory sentence of paragraph [0038] the structural formula is presented as defining a silicone "*having pendent (graft) amino groups*". A possible choice of $y'=1$ does not result in "*pendent (graft) amino groups*" and is thus not according to the patent claims.

"Aminosilicone 1" in example 4 of D1 does not have amino side chains and, therefore, is not according to feature (a) of claim 1.

2.4 For these reasons the claims of the granted patent are novel over D1.

3. Inventive step (Article 56 EPC)

3.1 The patent is directed to compositions for forming a film on keratin fibres, see paragraph [0001].

The patent starts from the observation that semi-permanent hair treatment by application of direct dyes or particulate material such as glitter or pigments suffers from low adherence of the pigment or coloured material. This leads to staining of clothing or the skin and other unwanted effects, see paragraphs [0002] and [0003].

It is thus aimed at compositions that lead to increased adherence of coloured materials or pigments to the hair, paragraph [0004]. This aim is said to be achieved by the film forming compositions as defined in the claims. The film formed by aminosilicone polymers and silicone resins binds the coloured material and/or the pigments while the thickening system prevents the

composition from dripping off the hair and leads to adherence without generating sticky feel, see paragraph [0027].

- 3.2 Choice of the document representing the closest state of the art
 - 3.2.1 D7 deals with cladding ("gainage") of the hair with compositions containing pigments and film building silicone polymers, see page 1. D7 aims at improving the resistance of the colouration thus obtained to hair washing (page 2 lines 8-10). This goal is achieved by using a combination of silicone polymers, i. a. aminosilicones, and silicone resins in a non-aqueous solvent system, see page 2 lines 12-17.
 - 3.2.2 D1 is directed to hair conditioning compositions which at the same time may provide colouring benefits, see page 1. D1 starts from the observation that conditioners containing direct dyes need to be stored at higher pH than conditioners without dyes due to the better stability of the dye molecules at high pH. However, the higher pH leads to product instability such as phase separation upon storage. This problem is tackled by using a specific combination of surfactants, see page 2, third paragraph. The proposed hair conditioning compositions comprise surfactants, fatty compounds, a direct dye and thickening polymers and lead to improved product and colour stability, as well as conditioning and colouring benefits, see "summary of the invention" on pages 2 and 3.
 - 3.2.3 The Opposition Division chose D7 as document representing the closest prior art, see point 8.8 of the decision under appeal. The Opposition Division reasoned its choice with D7 being closer to the

subjective problem stated in the patent, i. e. the better adherence of coloured material to hair by means of building a film on the hair. This was achieved using similar means than in the patent, i. e. the use of aminosilicone polymers in combination with silicone resins. On the other hand, the main issue D1 was concerned with is product stability, i. e. avoidance of phase separation and dye degradation during storage.

3.2.4 The appellant did not contest that D7 was a suitable starting point for an inventive step analysis. However, the appellant submitted that D1 was at least an equally valid starting point. In such a situation an analysis of inventive step could not be limited to an assessment starting only from one of the suitable documents. In particular the appellant argued that, if a skilled person arrives in an obvious way at the claimed subject-matter when starting from D1, it does not matter whether starting from D7 this was not the case. D1 would be then, logically, the best springboard to the claimed invention and thus the best starting point for an inventive step analysis.

3.2.5 The appellant argued that, from a structural point of view, the compositions disclosed in D1 were closer to the patent claims than the ones disclosed in D7. As apparent from the outcome on novelty the claims differed from the composition of example 4 of D1 at most in that the molecular weight of the aminosilicone polymer was not given. On the other hand the compositions of D7 were structurally further away as they were non-aqueous. Moreover, while D7 admittedly dealt with pigments, claim 1 of the patent was not directed to pigments only but also to "*coloured material*", thus covering the direct dyes disclosed in D1 as part of the hair conditioning compositions.

Regarding the purpose of D1 the appellant stressed that, apart from product stability and conditioning effects D1 also dealt with improvements in hair colouring. In particular it was made reference to page 16, lines 7-17 which described combinations of aminosilicones and silicone resins that prevent colour loss of coloured hair.

- 3.2.6 The Board considers the Opposition Division's approach to select D7 as closest prior art document and to analyse inventive step starting from this document to be correct.

D7 deals with the same problem as the patent, namely adherence of colour to hair by means of forming a film around them, using aminosilicone polymers. This is extensively described throughout D7, as set out above.

This problem is not addressed in the general part of D1, neither with respect to pigments nor with respect to any other type of coloured material. As outlined above, D1 is mainly concerned with the avoidance of storage stability problems of hair conditioner compositions containing direct dyes and proposes a specific surfactant combination for this purpose. It is correct that D1 mentions prevention of colour fading using aminosilicone polymers on page 16. However, this disclosure is part of a three page description of silicone polymers as optional ingredients for the provision of "*smoothness and softness on dry hair*" (page 13 second paragraph). One out of nine example compositions uses a film-forming aminosilicone, "aminosilicone-2", but film-forming properties neither of "aminosilicone-2" nor of the resulting composition

are mentioned in D1. One has to refer to the product data sheet D2 in order to obtain this information.

A skilled person would have to deeply dig into D1, supplemented by D2, to realize that part of this document may be directed to the same purpose than the patent and was using similar means, i. e. film-forming compositions containing aminosilicones for adherence of pigments or coloured materials to the hair.

3.2.7 The Board does not deny that in case of several "close" prior art documents a skilled person may have used any of them as a starting point and it may be necessary to assess inventive step from multiple angles. However, in the present case a skilled person addressing the problem of the patent would not have started from D1, but from D7. In this sense, in the present situation D1 is not a "realistic starting point".

3.3 Objective technical problem and obviousness of the solution

3.3.1 The appellant did not contest the Opposition Division's conclusion that the provision of the compositions defined in the patent claims were based on an inventive step when starting from D7. Thus, this issue is not object of the appeal proceedings.

3.3.2 The appellant argued that, independent from the selection of the closest prior art discussed above, the claimed compositions would still be obviously derivable when starting from D1. The Board disagrees, for the reasons outlined below.

3.3.3 To be obviously derivable from D1 a skilled person would have to start from D1 in the first place. That

this is not realistic in the present circumstances has been reasoned above.

- 3.3.4 Example 4 of D1 is discussed above in the section on novelty. If one nevertheless takes example 4 of D1 as a starting point, claim 1 of the patent does not differ from this example composition *only* in that the molecular weight of the aminosilicone is not known, as submitted by the appellant. Claim 1 of the patent also requires the presence of components (c) and (d), i. e. an ether of a polyhydric alcohol and a thickening system comprising a deposition enhancer and a thickening polymer as defined in the claim.

The appellant submitted that "hydroxyethylcellulose 1", identified as *Natrosol 250 HHR* in the examples of D1, simultaneously read on feature (c) and on both components of the thickening system defined in feature (d) of the claim.

However, this is not how a skilled person would understand the claim. Ether (c) and the two components of the thickening system (d) all have different functions in the composition. One compound present in the composition of example 4 in D1 cannot be read simultaneously on all three of these components. The hydroxyethylcellulose disclosed in D4 is presented there as a thickening polymer (page 12 lines 8-16), corresponding to the second component of the thickening system (d) defined in the claim.

- 3.3.5 The objective technical problem starting from D1 was the provision of alternative compositions useful for enhancing colour adhesion to the hair. This problem is solved by the compositions defined in claim 1 of the patent, which are characterized at least by containing

an aminosilicone polymer having amino side chains and an average molecular weight between 10 and 60 kDa, a deposition enhancer in combination with a thickening polymer as defined in feature (d), and an ether of a water soluble polyhydric alcohol (c).

- 3.3.6 For the aminosilicone the appellant referred to D1 itself, stating that general formula (III) on the bottom of page 13 covered the molecular weight range defined in the claim. However, as pointed out by the respondent, none of the more specific formulae described later on page 13-16 relates to aminosilicones having side chains. The graft aminosilicones disclosed on page 16 are supposed to be used *"together with the above aminosilicones of formula (III)"*, i. e. they are not meant to be covered by formula (III) as such.

Furthermore, the appellant referred to the product "Wacker HC 303" used in example 6 of D6 which is also mentioned in paragraph [0049] of the patent. However, unlike D1, D6 deals with the adherence of pigments, not direct dyes, to the hair. A skilled person would not have readily combined these documents. Moreover, in the examples of D6 the aminosilicones are not used in combination with silicone resins, as required by the claim.

- 3.3.7 Regarding the addition of the deposition enhancer in combination with the thickening polymer (feature (d)) and the ether of the polyhydric alcohol (c) the appellant has submitted no arguments as to why a skilled person would have added such compounds to the composition of example 4 of D1. The argument that "hydroxyethylcellulose-1" can be read on all of these components is not convincing, see above.

3.3.8 Thus, even if a skilled person would have used D1 a starting point it would not have arrived at the compositions defined in the claim. This confirms that D1 is not "closer" to the claimed invention than D7, as argued by the appellant. It also confirms that the Opposition Division's choice of D7 as the document representing the closest state of the art was not flawed, as argued by the appellant.

4. In summary, the Opposition Division's decision to reject the appellant's opposition was correct.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated