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**Datasheet for the decision
of 18 October 2006**

Case Number: T 1430/04 - 3.3.06

Application Number: 97922934.1

Publication Number: 0900260

IPC: C11D 1/645

Language of the proceedings: EN

Title of invention:

High di(alkyl fatty ester) quaternary ammonium compound from
trialkanol amine

Patentee:

Akzo Nobel N.V.

Opponents:

Atofina
Cognis Iberia, S.L.
The Procter & Gamble Company
Degussa AG
Kao Corporation S.A.
STEPAN EUROPE S.A.

Headword:

Substituents/AKZO

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

"Added subject-matter (main request and auxiliary requests 1
to 10): yes - combination serving as support for an amendment
not disclosed in the application as filed"

Decisions cited:

T 0150/82, T 0095/83, T 0124/87, T 0382/96

Catchword:

-



Case Number: T 1430/04 - 3.3.06

DECISION
of the Technical Board of Appeal 3.3.06
of 18 October 2006

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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 20 October 2004
revoking European patent No. 0900260 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: P.-P. Bracke
Members: G. Raths
U. Tronser

Summary of Facts and Submissions

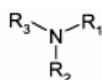
- I. This appeal is from the decision of the Opposition Division to revoke the European patent No. 0 900 260 relating to a high di(alkyl fatty ester) quaternary ammonium compound from trialkanol amine.
- II. Six oppositions had been filed, *inter alia*, on the grounds of Articles (100(a) and (c) EPC), in particular for lack of novelty (Article 54(1)(2) EPC) and inventive step (Article 56 EPC) and added subject-matter (Article 123(2) EPC). The opponents relied, *inter alia*, on the following document:
- (R1) WO-A-91/01295.
- III. The Opposition Division had eventually to decide on the main request as filed prior to oral proceedings and a new auxiliary request filed during oral proceedings before the Opposition Division.
- In its decision the Opposition Division found that the subject-matter according to the main request was not novel and the subject-matter of the auxiliary request did not involve an inventive step.
- IV. The proprietor (hereinafter appellant) filed an appeal against this decision and filed together with the statement of the grounds of appeal a main request as well as a myriad of building blocks of auxiliary requests.

wherein each R can be the same or different and is represented by a substituted or unsubstituted hydrocarbon radical having from 12-22 carbon atoms and an iodine value of from 20 to 90, R₁' , R₂' and R₃' are independently selected from C₂-C₄ alkyl groups, R₄' is C₁-C₃ straight or branched chain alkyl or C₇-C₁₀ aralkyl, and wherein said di-ester component (II) comprises greater than 55 wt% and the tri-ester component (III) comprises less than 20 wt% based on the total amount of the quaternary ammonium salt mixture, X⁻ represents a softener compatible anion."

"32. A quaternary ammonium salt mixture obtainable by a process which comprises reacting, at a temperature of from 170°C to 210°C:

I) a C₁₂-C₂₂ substituted or unsubstituted fatty acid or mixture of fatty acids having an iodine value of from 20 to 90, and having less than 20% trans double bonds, with

II) an alkanolamine of the formula:



wherein R₃, R₁ and R₂ are independently selected from C₂-C₄ hydroxyalkyl groups, wherein the molar ratio of said fatty acid to alkanol amine preferably is from 1.6 to 1.8, and wherein said reaction temperature is increased from 70°C to a range of from 170°C to 210°C, wherein the reaction temperature is maintained within a range of 170° to 210°C until the reaction product has an acid value of below 5 and wherein the rate of temperature increase is maintained within a range of from 0.8°C to 3°C/minute in order to obtain an ester composition with greater than 55 wt% diester component and less than

25 wt% triester component, and quaternizing same with C₁-C₃ straight or branched chain alkyl halides, phosphates, carbonates, or sulfates, C₇-C₁₀ aralkyl halides, phosphates or sulfates, or mixtures thereof in order to obtain a quaternary ammonium salt mixture."

Claim 1 of auxiliary request 1 differed from Claim 1 of the main request in that "55 wt%" was replaced with "60 wt%" and "20 wt%" with "15 wt%".

Claim 1 of auxiliary request 2 differed from Claim 1 of the main request in that "55 wt%" was replaced with "60 - 65 wt%" and "20 wt%" with "18 wt%".

Claim 1 of auxiliary request 3 differed from Claim 1 of auxiliary request 2 in that "18 wt%" was replaced with "15 wt%".

Claim 1 of auxiliary requests 4 and 5 were identical to Claim 1 of auxiliary request 1.

Claim 1 of auxiliary requests 6 and 7 were identical to Claim 1 of auxiliary request 3.

Claim 22 of auxiliary request 8 and Claim 15 of auxiliary request 9 were identical to Claim 32 of the main request.

Claim 1 of auxiliary request 10 differed from Claim 32 of the main request in that the word "preferably" had been deleted between "amine" and "is".

VII. Oral proceedings took place on 18 October 2006, respondents 1 and 3 not being represented as announced in their letters dated 26 September 2006 and 19 June 2006, respectively, filed with the EPO after receipt of the summons to oral proceedings.

VIII. The proprietor (appellant) argued that the Opposition Division came to the wrong decision because it did not understand the merits of the invention, misread the prior art and applied hindsight.

The subject-matter of the claims of the sets of requests filed under cover of the letter dated 5 September 2006 would find support in the application as filed and would be novel and inventive over document (R1).

IX. The opponents (respondents) argued that the appeal was inadmissible.

They also refuted the arguments of the appellant that Claim 1 of the main request and of auxiliary requests 2 to 7 would not contravene Article 123(2) EPC since, *inter alia*, no support would be found in the application as filed for the embodiment combining the formulae (I), (II) and (III) having the substituents R_1' , R_2' and R_3' and each of the specific concentrations of the di-ester component (II) and of the tri-ester component (III).

Further, there would be no basis for "a quaternary ammonium salt mixture obtainable by a process" in combination with the process feature

"wherein the rate of temperature increase is maintained within a range of from 0.8°C to 3°C/minute in order to obtain an ester composition with greater than 55 wt% diester component and less than 25 wt% triester component, and quaternizing same with C₁-C₃ straight or branched chain alkyl halides, phosphates, carbonates, or sulfates, C₇-C₁₀ aralkyl halides, phosphates or sulfates, or mixtures thereof in order to obtain a quaternary ammonium salt mixture"

in Claim 32 of the main request.

Also, the claimed subject-matter would lack novelty and inventive step.

- X. The appellant requests that the decision under appeal be set aside and that a patent be maintained according to the main request or one of the auxiliary requests 1 to 10, all requests submitted under cover of the letter dated 5 September 2006.

The respondents request that the appeal be dismissed.

Reasons for the Decision

1. Admissibility of the appeal
 - 1.1 The Board agrees with the respondents that the myriad of building blocks of auxiliary requests would render the appeal inadmissible when forming the sole request submitted with the statement of the grounds of appeal

(see T 382/96, point 5.5 of the reasons for the decision, unpublished).

In its statement of the grounds of appeal the appellant however had requested that the decision of the Opposition Division be set aside and that the patent be maintained in amended form with claims in accordance with the enclosed set of claims marked "Main Request". Since this request and the enclosed set of claims with the indication "Main Request" define the extent of the appeal in a clear and unambiguous manner, the appeal complies with the provisions of Articles 106 to 108 and Rule 64 EPC.

2. Procedural issues (Auxiliary requests 1 to 10)

As to the number of auxiliary requests (see point IV) which could amount to about 800 possible combinations, the Board, in this case, found it appropriate to draw the attention in a communication dated 29 May 2006 to the fact that the Board can only decide whether a request **as a whole** meets the requirements of the EPC and that it is the patent proprietor's responsibility to provide complete sets of claims (see T 382/96, point 5.2).

The appellant tried to overcome this objection by submitting auxiliary requests 1 to 10 under cover of the letter dated 5 September 2006 (see point VI).

The Board observes that amendments, *inter alia*, to claims should be done at the earliest possible moment (see T 95/83, point 8).

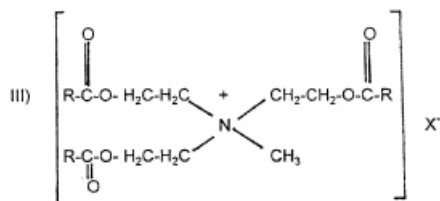
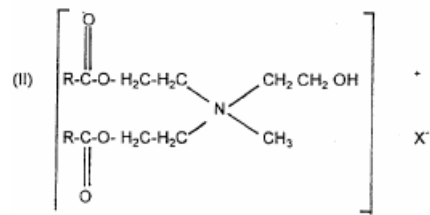
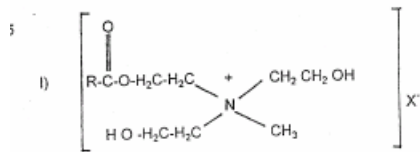
The Board, in this case admitted the ten auxiliary requests, because their formal admissibility, in particular the infringement of Article 123(2) EPC, could be easily checked without any procedural delay.

3. Article 123(2) EPC

3.1 Main request

3.1.1 Claim 1 as filed read:

"1. A textile softening composition with improved stability and softening performance which comprises a fabric softening effective amount of a quaternary ammonium salt mixture having mono-, di- and tri-ester components of the following formulae (I)-(III):



wherein each R can be the same or different and is represented by a substituted or unsubstituted

was inserted between "90," and "wherein", whereby the comma was deleted before "wherein", and in that "25 wt %" was replaced by "20 wt%".

- 3.1.3 The appellant argued that the resultant quaternary ammonium salt comprising a mixture of mono-(I), di-(II) and tri-ester (III) components of the formulae having "-CH₂-CH₂-" as defined in the application as filed (see for instance Claim 1 as filed or the passage bridging pages 9 and 10 of the application as filed) would only be an exemplary embodiment but not a restriction to this embodiment only.

The replacement from "-CH₂-CH₂-" with the substituents R₁' , R₂' and R₃' in the formulae (I), (II) and (III) was an amendment which would find its basis in Claim 9 as filed and in the description of the application as filed (page 6, line 12 to page 10, line 26).

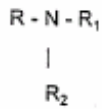
- 3.1.4 The Board does not agree with the appellant's arguments for the following reasons:

Claim 9 as filed reads:

"9. A process for the preparation of a quaternary ammonium salt which comprises reacting, at a temperature of from 170°C to 210°C:

I) a C₁₂-C₂₂ substituted or unsubstituted fatty acid or mixture of fatty acids having an Iodine Value of from about 20 to about 90, and having less than 20% trans double bonds, with

II) an alkanolamine of the formula:

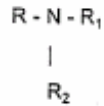


wherein R, R₁ and R₂ are independently selected from C₂-C₄ hydroxyalkyl groups, wherein the molar ratio of said fatty acid to alkanol amine is from about 1.6 to 1.8, and wherein said reaction temperature is increased from about 70°C to a range of from about 170°C to 210°C, wherein the rate of temperature increase is maintained within a range of from about 0.8°C to 3°C per minute in order to obtain an ester composition with greater than about 55 wt% diester component and less than about 25 wt% trimester component, and quaternizing same in order to obtain to quaternary ammonium salt."

The argument of the appellant was that Claim 9 as filed would support the amendment replacing "-CH₂-CH₂-" with the substituents R₁', R₂' and R₃' in the formulae (I), (II) and (III) because such a process would indirectly lead to the mono-, di- and tri-ester components of the formulae (I), (II) and (III) having R₁', R₂' and R₃' substituents. The Board does not accept this argument.

In accordance with the established jurisprudence of the Board of Appeal, the relevant question to be decided in assessing whether an amendment adds subject-matter extending beyond the content of the application as filed, is whether the proposed amendments were **directly and unambiguously** derivable from the application as filed. In deciding what can be directly and unambiguously derived from a document, speculations as to what was made available to the public are not allowed.

In particular, the Board has considered the passage relating to alkanolamines corresponding to the formula



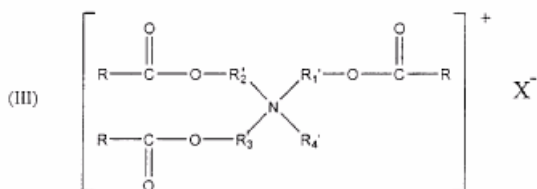
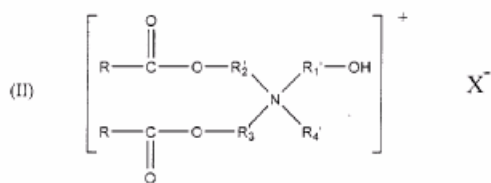
wherein R, R₁ and R₂ are independently selected from C₂-C₄ hydroxyalkyl groups and which are reacted with fatty acids or the hydrogenation products thereof (see application as filed, page 7, lines 1 to 4 and page 7, lines 25 to page 8, line 5).

The Board makes a distinction between the products per se as specifically described in the application as filed and the products obtained by the esterification and alkylation process as outlined in the application as filed (page 8, line 20 to page 9, line 11).

The information in the application as filed regarding the products is clear and unambiguous:

"The amount of di-ester component in the final product is generally greater than about 55 wt% and the amount of tri-ester component is generally less than 25 wt% based, preferably less than 20% by weight based on the total amount of the quaternary ammonium salt product."
(page 10, lines 21 to 26).

This passage clearly is to be read in combination with the mono-, di- and tri-ester having the respective formulae (I), (II) and (III) with the "-CH₂-CH₂-" substituents (page 9, line 21 to page 10, line 20).



in combination with the concentrations of di-ester and tri-ester components solely described in the application as filed for components having "-CH₂-CH₂-" moieties, the reasons set out under point 3.1.4 apply *mutatis mutandis*.

Thus, Claim 1 of auxiliary requests 2 to 7 contravenes Article 123(2) EPC.

3.3 Auxiliary request 8

3.3.1 Claim 22 of auxiliary request 8 is identical to Claim 32 of the main request.

Independently of Article 123(2) EPC, the Board finds it appropriate to comment on the draft of Claim 22.

Claim 22 of auxiliary request 8 refers to "a quaternary ammonium salt mixture obtainable by a process".

Without commenting in detail on the word "obtainable", according to T 150/82 (OJ 1984, 309) product-by-process claims are only admissible if there is no other information available in the application which could

have enabled the applicant to define the product satisfactorily by reference to its composition, structure or some other testable parameter.

The Board observes that actually the product in the patent in suit was defined by reference to its composition (see Claim 1 as filed and the passage bridging pages 9 and 10). Therefore, there was no need to define the product in terms of a process.

Already for this reason alone "a product by process claim" is not admissible.

3.3.2 The following passage of Claim 22 of auxiliary request 8 does not find support in the application as filed:

"...in order to obtain an ester composition with greater than 55 wt% diester component and less than 25 wt% tri-ester component, **and quaternizing** same with C₁-C₃ straight or branched chain alkyl halides, phosphates, carbonates, or sulfates, C₇-C₁₀ aralkyl halides, phosphates or sulfates, or mixtures thereof in order to obtain a quaternary ammonium salt mixture." (emphasis added)

The passage of the application as filed which refers to concentrations of "greater than about 55% by weight" for the di-ester and "less than about 25% by weight" for the tri-ester reads:

"...the amount of diester in the **final product** is generally greater than about 55% by weight and the amount of tri-ester is generally less than about 25% by weight, preferably less than 30% by weight

based on the total amount of quaternary ammonium salt product." (emphasis added)
(page 10, lines 21 to 26)

So, this passage in the application as filed refers to concentrations of the **final** product whereas Claim 22 refers to the concentrations **before** quaternization.

Hence the passage of Claim 22 of auxiliary request 8 reading

"in order to obtain an ester composition with greater than 55 wt% diester component and less than 25 wt% tri-ester component"

followed by

"and quaternizing....."

unambiguously refers to the concentrations **before quaternization** and **not to the final product** and, therefore, said passage finds no support in the application as filed. Claim 22 of auxiliary request 8 contravenes Article 123(2) EPC.

3.4 Auxiliary requests 9 to 10

The reasoning under point 3.3 applies *mutatis mutandis* to the subject-matter of Claim 15 of auxiliary requests 9 and 10 because these claims are both identical to Claim 22 of auxiliary request 8.

Therefore, Claim 15 of each of auxiliary requests 9 and 10 contravenes Article 123(2) EPC.

4. None of the requests meets the requirements of the EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

P.-P. Bracke