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D E C I S I O N
of 13 September 2005

Case Number: T 1181/02 - 3.3.6

Application Number: 96932507.5

Publication Number: 862609

IPC: C11D 1/94

Language of the proceedings: EN

Title of invention:
Laundry detergent composition

Patentees:
Unilever PLC and Unilever NV

Opponent:
Henkel KGaA

Headword:
Softening detergent composition/UNILEVER

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Main request - novelty (no): credibility of experimental data not affected by unsupported allegations"
"First and second auxiliary requests - inventive step (no): distinguishing features not disclosed to result in a particular technical effect at least indirectly related to the technical problem initially set out in the patent"

Decisions cited:
-

Catchword:
-

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Case Number: T 1181/02 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 13 September 2005

Appellant: (Opponent)
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Representative:
-

Respondents: (Proprietor of the patent)
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Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 10 October 2002 concerning maintenance of the European patent No. 862609 in amended form.

Composition of the Board:

Chairman: P. Krasa
Members: P. Ammendola
A. Pignatelli

Summary of Facts and Submissions

I. This appeal is from the interlocutory decision of the Opposition Division concerning the maintenance in amended form of the European patent No. 0 862 609 according to the then pending main request of the Patent proprietors.

II. Claim 1 of this request (hereinafter "claim 1 as maintained") read:

"*1. A fabric softening detergent composition comprising*

(i) a detergent surfactant comprising an amphoteric surfactant and/or a nonionic surfactant;

(ii) a substantially water insoluble fabric softening compound having a solubility not exceeding 1 x 10^{-3} wt% in demineralised water at 20°C and comprising a compound having two C_{12-22} alkyl or alkenyl groups connected to a quaternary ammonium head group via at least one ester link or a quaternary ammonium compound comprising of a single chain with an average chain length equal to or greater than C_{20} and;

(iii) a detergency booster comprising one or more of:

(a) builder present in an amount of from 5 to 80wt%,

(b) a bleach system,

(c) an enzyme present in an amount from 0.1 to 3wt%,

(d) a soil release agent present in an amount from 0.1 to 10%

(iv) optionally, anionic surfactant, at a level of up to 100 molo% of the softener (ii)

wherein when constituents (i) and (ii) are diluted in water to a concentration of 5 wt% of (i) and (ii), at least 70 wt% of the fabric softening (ii) compound is in solution, and further wherein the weight ratio of detergent surfactant (I) to fabric softening compound (ii) is at least 1:1."

III. The Opponent had sought revocation of the patent in suit on the grounds of lack of novelty and of inventive step (Article 100(a) in combination with Articles 52(1), 54 and 56 EPC). During the opposition proceedings it had cited, *inter alia*, Document (10) = DE-A-35 36 258 and Document (18) = WO 94/06899. It also filed under cover of a letter dated 16 August 2002 some experimental data (hereinafter "data of 2002").

IV. The Opposition division found *inter alia* that the subject-matter of claim 1 as maintained was not anticipated by the detergent compositions disclosed in Document (18) and was not obvious for the skilled person searching for a novel detergent composition with excellent detergent and softening properties and starting out from the prior art disclosed in Document (10) and/or Document (18).

V. The Opponent (hereinafter Appellant) lodged an appeal against this decision. With the grounds of appeal dated 6 February 2003 it filed additional experimental data (hereinafter "data of 2003").

VI. During the appeal proceedings the Patent proprietors (hereinafter Respondents) filed *inter alia* five sets of amended claims under cover of a letter dated 9 September 2005. These sets were labelled "Auxiliary request I" to "Auxiliary request V".

VII. At the oral proceedings held before the Board on 13 September 2005 the Respondents withdrew all auxiliary requests except the "Auxiliary request I" and the "Auxiliary request V" of 9 September 2005. At the hearing they contested for the first time the credibility of the Appellant's data of 2003.

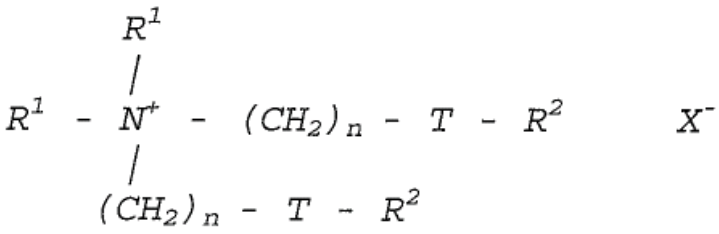
VIII. Claim 1 according to the **Auxiliary request I** differs from claim 1 as maintained (see above point II) in that the final expression "*is at least 1:1.*" has been replaced by "*is within the range from 5:1 to 30:1.*". Moreover, two evident clerical errors present in claim 1 as maintained, i.e. "*molo%*" (in the definition of reagent (iv)) and "*surfactant (I)*" (at the end of the claim), have been corrected into "*mol%*" and "*surfactant (i)*" respectively.

Claim 1 according to the "**Auxiliary request V"** differs from that of the "Auxiliary request I" in that:

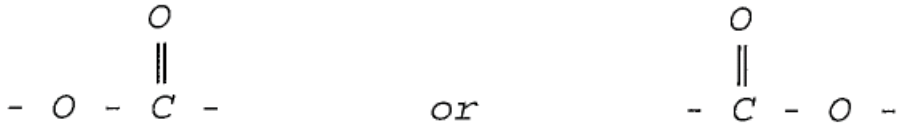
- the initial wording "*A fabric softening detergent composition comprising*" has been replaced by "*A fabric*

softening detergent composition which is in the liquid form comprising", and

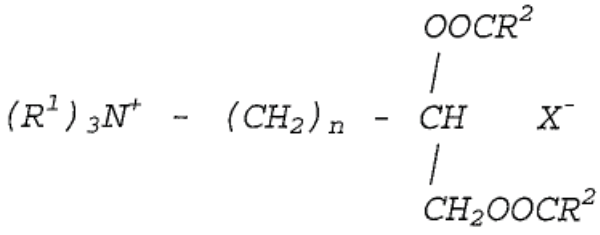
- the expression "*and comprising a compound having two C_{12-22} alkyl or alkenyl groups connected to a quaternary ammonium head group via at least one ester link or a quaternary ammonium compound comprising of a single chain with an average chain length equal to or greater than C_{20} and;*" has been replaced by "*and represented by the formula:*



wherein each R^1 group is independently selected from C_{1-4} alkyl, hydroxyalkyl or C_{2-4} alkenyl groups; and wherein each R^2 is independently selected from C_{12-22} alkyl or alkenyl groups; T is



X^- is any suitable anion and n is an integer from 0-5, or by the formula



wherein R^1, n, X^- and R^2 are as defined above;".

IX. The Appellant contested the novelty of the subject-matter of claim 1 as maintained. It argued that the experimental data of 2003 credibly demonstrated that the nonionic surfactant and the esterquat used in example 3 of Document (18) satisfied the solubility requirements for components (i) and (ii) as defined in the claim. The Appellant also stated that it had been taken by surprise by the objections to the credibility of the data of 2003 raised by the Respondents for the first time at the oral proceedings before the Board. Since it had no possibility of consulting its technical experts on the validity of these belated objections, the latter were to be disregarded.

At the oral proceedings the Appellant agreed to discuss the patentability of the auxiliary requests despite their late filing and concluded that the subject-matter of claim 1 of both pending auxiliary requests was not based on an inventive step.

In particular, the Appellant maintained in respect of the subject-matter of claim 1 according to the Auxiliary request I that, similar to the compositions of Document (10), those disclosed in Document (18) also displayed excellent cleaning and softening properties (see Document (18) page 11, lines 12 to 16 and examples 1, 3 and 4). Moreover, the claimed subject-matter differed from example 3 of Document (18) only by the ratio of the respective amounts (hereinafter "amount ratio") of ingredients (i) and (ii). Hence, this prior art example represented the most reasonable starting point for the assessment of inventive step. The Appellant stressed that the patent in suit did not

associate any additional advantage to the narrower (i):(ii) amount ratio range introduced in the claim under consideration. On the other hand, Document (18) disclosed at page 7, lines 8 to 11, the possibility of varying such amount ratio over ranges largely overlapping with that defined in the claim.

The Appellant maintained that a similar reasoning applied to the subject-matter of claim 1 according to the Auxiliary request V in respect of the further added feature distinguishing the compositions according to this claim from example 3 of Document (3), i.e. the liquid form. It stressed that for the skilled detergent formulator it was usual to prepare substantially similar detergent compositions in both liquid and solid forms.

X. The Respondents refuted the Appellant's reasoning by arguing substantially as follows.

The filing of the auxiliary requests under cover of the letter of 9 September 2005 and the mention for the first time during the oral proceedings before the Board of the objections to the credibility of the data provided by the Appellant as long ago as 2003 were due to a recent change of the professional representative.

The potentiometric titration method used by the Appellant to obtain the experimental data of 2003 would be different from the corresponding colorimetric method disclosed in the patent in suit. Moreover, even though the skilled person could in principle consider using the potentiometric two-phase titration for determining the amount of softening component which is dissolved,

he would not consider it as a suitable replacement of the corresponding colorimetric method, because the former would be known to be less precise that the latter. Finally, the measured values were so inconsistent as to suggest that an error must have occurred during the experiments carried out by the Appellant.

The prior art more relevant in view of the assessment of inventive step was that disclosed in Document (10) which addressed the same technical problem identified in the patent in suit. Contrary to the Appellant's arguments, it was not evident whether the very good detergency mentioned e.g. in example 3 of Document (18) was the same as the excellent detergency aimed at in the patent in suit. However, even when starting from this latter citation the skilled person would have no reason to increase the amount ratio (i):(ii) used in this example so as to arrive at the subject-matter of claim 1 of the Auxiliary request I.

The same applied even more to the liquid composition according to claim 1 of the Auxiliary request V which represented the additional unforeseeable advantages of being transparent or at least translucent and of containing self-size-limiting molecular aggregates.

XI. The Appellant has requested that the decision under appeal be set aside and the patent be revoked.

XII. The Respondents have requested that the appeal be dismissed and that the patent be maintained on the basis of:

1. Main request
Patent as maintained

2. First auxiliary request
Claims 1 to 13 filed as Auxiliary request I with letter of 9 September 2005

3. Second auxiliary request
Claims 1 to 10 filed as Auxiliary request V with letter of 9 September 2005.

Reasons for the decision

Main request of the Respondents

1. Claim 1 as maintained: Novelty (Article 100(a) in combination with Articles 52(1) and 54 EPC)

1.1 The detergent compositions of present claim 1 (see above point II) must comprise a nonionic or amphoteric surfactant (i), a substantially insoluble quaternary ammonium/ester (hereinafter also "esterquat") as softening compound (ii) and one or more of the ingredients listed as "*detergency booster*" under (iii). The claim further requires the ingredients (i) and (ii) to be present at a ratio of at least 1:1 and to display the property that, when diluted in water at a concentration of 5wt%, at least 70wt% of the *per se* substantially insoluble esterquat is dissolved.

1.2 The Board observes that the composition disclosed in example 3 of Document (18) comprises a nonionic surfactant and an esterquat at a ratio of about 3.3:1.

It also comprises builders and an enzyme according to the definition of ingredient (iii) in present claim 1. Moreover, the experimental data filed by the Appellant in 2002 demonstrate that the esterquat used in this prior art example is substantially insoluble, as also required in the present claim. This has not been disputed by the Respondents.

1.3 The Respondents have instead - and not until the oral proceedings before the Board - objected to the credibility of the data of 2003. The latter were filed by the Appellant (see point 5 of the grounds of appeal) in order to demonstrate that a 5wt% dilution of the esterquat and the nonionic surfactant used in example 3 of Document (18) results in substantially complete dissolution of the esterquat. According to the data of 2003, six samples of the mixture of esterquat and the nonionic surfactant used in example 3 have then been diluted to 5wt% in water and filtered as disclosed in Test 1 of the patent in suit. On each sample the amounts of esterquat before and after filtration have been determined three times by potentiometric two-phase titration method and the obtained values have been averaged.

The Respondents argued that the titration method used in the experiments carried out by the Appellant is different from the colorimetric two-phase titration method mentioned in Test 1 of the patent in suit. Moreover, the former is also known to the skilled person to provide less precise results than the latter.

Finally, they have underlined that in some of the samples of the data of 2003 (see in particular samples 5 and 6 in the table at point 5 of the grounds of appeal) all the measured amounts of esterquat in the filtrate are so superior to those measured before filtration, that such substantial difference cannot be attributed to the unavoidable variability of any experimental measures. This difference would rather suggest, in the Respondents' opinion, that something (possibly the filtration or the titration of the filtered samples) must have gone wrong during the Appellant's experiment.

1.3.1 The Board notes that neither the claim under consideration nor the patent description require the solubility characteristics of the mixture of ingredients (i) and (ii) to be necessarily assessed with a certain specific precision or according to the tests disclosed in the patent description. In particular, paragraph 13 of the patent in suits states "*….The following tests **may** be used to determine definitely whether or not a composition falls within the present invention.*" (emphasis added by the Board), thereby indicating that the disclosed tests are just some of the possible - but not the only mandatory ones - methods for assessing the occurrence of the solubility properties of ingredients (i) and (ii) of the claimed compositions.

Therefore, the Respondents' argument that the potentiometric two-phase titration method is different from the method used in the patent in suit does not deprive of relevance the data of 2003.

1.3.2 On the other hand, the Board observes that the Respondents have neither determined quantitatively the uncertainty margin of the titration method used by the Appellant (e.g. so as to allow to determine whether or not the values reported in the data of 2003 could possibly also have been measured on samples wherein less than 70wt% of the esterquat has been dissolved) nor provided evidence that the (allegedly generally known) difference in precision between the potentiometric and the colorimetric two-phase titration methods is so severe as to render the former manifestly unsuitable for testing the solubility characteristics of the mixture of ingredients (i) and (ii) as defined in the present claim. On the contrary, the Respondents have explicitly conceded at the oral proceedings that this potentiometric method may be used for titrating esterquats.

Therefore, the Respondents' argument that the (allegedly) generally known (but non-quantified) lower precision of the potentiometric two-phase titration method vis-à-vis that of the colorimetric method would render the former manifestly unsuitable for establishing the solubility properties of the nonionic and esterquat ingredient used in example 3 of Document (18) amounts to an unproven allegation.

1.3.3 Finally, the Board also observes that the Respondents have neither attempted to repeat the tests carried out by the Appellant nor provided any other evidence supporting the Respondents' argument that the correct execution of these experiments is incompatible with the fact that in two out of six samples the measured

esterquat amount values in the filtrate are much larger than in the unfiltered initial mixture.

Hence, the Board has no grounds for reasonably attributing the differences among the measurements reported in the data of 2003 to the occurrence of an avoidable error, rather than to the variability inevitably associated with such measuring under real experimental conditions. Thus, the Board also finds this argument of the Respondents to be an unsupported allegation.

1.3.4 Hence, the Board finds that the Appellant has credibly demonstrated with the data of 2003 that a 5wt% dilution of the esterquat and the nonionic surfactant mixture used in example 3 of Document (18) results in the substantially complete dissolution of the esterquat.

1.4 Therefore, the Board concludes for the reasons already indicated above at items 1.2 and 1.3.4 that the prior art detergent and softening composition disclosed in example 3 of Document (18) displays all the features of the subject-matter of claim 1 as maintained and, thus, that the latter is not novel. Hence, the main request of the Respondents does not comply with the requirements of Article 54 EPC.

Admissibility of the two auxiliary requests

2. The only two auxiliary requests maintained by the Respondents (see above points VII and VIII) were filed only few days before the oral proceedings of 13 September 2005. However, the Appellant has finally agreed to discuss them at the hearing. Hence, the Board

has decided to admit the Respondents' Auxiliary requests I and V of 9 September 2005 into the proceedings.

First auxiliary request

3. Claim 1 of the Auxiliary request I: Inventive step (Article 100(a) in combination with Articles 52(1) and 56 EPC)

3.1 While the Appellant considered the prior art disclosed in Document (18) as the starting point for the assessment of inventive step, the Respondents instead maintained that the most relevant prior art was represented by that disclosed in Document (10), because only this latter citation explicitly addressed (see Document (10) page 12, lines 16 to 32) substantially the same technical problem identified at paragraph 8 of the patent in suit, i.e. to provide a novel detergent composition which gives excellent softening properties and also excellent detergency.

3.2 However, the Board finds that Document (18) also addresses the same technical problem as considered in the patent in suit. Indeed, this citation mentions several times the achieved combination of excellent cleaning and softening properties of the detergent compositions disclosed therein (see Document (18) page 11, lines 12 to 16, as well as the examples 1, 3 and 4). The Board also observes that, contrary to the Respondents' allegation, the simple fact that cleaning properties of the composition of example 3 is qualitatively described as "very good" (see Document (18) page 14, lines 9 to 10, "…*sehr gute Wasch- und*

Reinigungseigenschaften…") does not imply any technical meaningful difference in respect of the similar qualitative expression "*excellent detergency*" used at paragraph 8 of the patent in suit for defining the aim of the invention.

The Board further observes that in the subject-matter currently claimed the softening ingredient (ii) comprises either two C_{12-22} hydrophobic blocks or a single hydrophobic block comprising at least 20 C atoms, so as to be substantially insoluble. The same applies to the softening ingredient of Document (18) and, particularly, of example 3 thereof comprising in combination all ingredients mentioned in the present claim. The softening agents of the prior art disclosed in Document (10) comprise instead a single hydrophobic block with preferably less than 20 C atoms and are expected to be substantially soluble (see in Document (1) claim 1 in combination with all the specific softening agents according to the invention as explicitly mentioned in claim 7, at page 17, lines 13 to 15, and in the examples and in view of the incidental teaching given at page 13, lines 29 to 30, as to the fact that these softening ingredients are at least partially water soluble). Therefore, the composition according to example 3 of Document (18) is closer to the subject-matter of present claim 1 than the compositions disclosed in Document (10). This finding has not been contested by the Respondents.

3.3 The Board concludes that, since both Documents (10) and (18) mention the same technical problem addressed in the patent in suit, but the compositions of Document (18) are structurally more similar to the presently

claimed compositions, it is reasonable to start the assessment of inventive step from the prior art disclosed in this latter citation. In particular, example 3 of Document (18) offers itself as a reasonable starting point.

3.4 The compositions of claim 1 differ from this prior art example only because this claim now requires a more narrow amount ratio range for ingredients (i) and (ii), i.e. laying "*within the range 5:1 to 30:1*". Instead in example 3 the nonionic/esterquat ratio is 3.3:1 (see above points VIII and 1.2).

3.5 It is undisputed that the patent in suit does not associate with the preferred amount range 5:1 to 30:1 any specific improvement in detergency and/or softening properties in respect of those of the compositions which are no longer being claimed, but initially encompassed by the broader range defined in claim 1 as maintained (i.e. wherein the ratio of (i):(ii) is "*at least 1:1*", see above item II). Nor have the Respondents alleged the existence of any such advantage. Hence, the only technical problem which may be regarded as credibly solved by the presently claimed composition vis-à-vis that disclosed in example 3 of Document (18) is to provide further compositions with excellent and softening properties and also excellent detergency, i.e. an alternative to this prior art.

3.6 The Board observes that Document (18) explicitly suggests that the ratio nonionic surfactants : esterquats may be varied from 5:95 to 95:5, preferably from 10:90 to 90:10, and in particular from 30:70 to 70:30 (see Document (18) page 7, lines 8 to 11). In

particular, the three ratios defining the upper limits of these increasingly preferred ranges are all encompassed within the presently claimed range of "*5:1 to 30:1*".

To solve the existing technical problem by simply varying in example 3 of Document (18) the relative amounts of the nonionic surfactant and esterquat within the ranges explicitly disclosed in this citation requires no inventive activity. Hence, the subject-matter of claim 1 under consideration represents an obvious alternative to the prior art disclosed in Document (18).

3.7 Therefore, the Board concludes that the subject-matter of claim 1 according to Auxiliary request I does not involve an inventive step and, thus, that this request does not comply with the requirements of Article 56 EPC.

Second auxiliary request

4. Claim 1 of the Auxiliary request V: Inventive step (Article 100(a) in combination with Articles 52(1) and 56 EPC)

This claim differs from that of the previous auxiliary request only in that the ingredient (ii) is now limited to the compounds of formula (1) and in that the claimed composition is now required to be in the liquid form (see above point VIII).

4.1 As expressly conceded also by Respondents at the oral proceedings before the Board, the esterquat used in example 3 of Document (18) is also according to formula

(1) of the present claim. Moreover, Document (18) explicitly mentions the possibility of preparing liquid detergent compositions (see Document (18) page 8, lines 11 to 15, and examples 1 and 4).

Hence, the Board finds that the prior art disclosed in this citation, and in particular the solid detergent composition of example 3, also represents a reasonable starting point for the assessment of inventive step for the subject-matter of the present claim. This has not been disputed by the Respondents.

4.2 It is also apparent from the above considerations that the subject-matter currently claimed differs from this prior art example only in the range of amount ratio of ingredients (i) and (ii) of 5:1 to 30:1 (i.e. the same feature already present in claim 1 of the Auxiliary request (I)) and for the liquid form of the composition. Since, as discussed above at point 3, the range of amount ratio of ingredients (i) and (ii) of 5:1 to 30:1 does not contribute any inventive step, it remains only to be assessed which technical problem has been objectively solved vis-à-vis example 3 of Document (18) by the liquid form of the presently claimed compositions and whether such distinguishing feature represents an obvious or an inventive solution to this problem.

4.3 It is undisputed that the patent in suit does **not** associate the liquid form of the presently claimed composition to any **additional** improvement in detergency and/or softening properties in respect of the initially patented solid compositions which have been found anticipated by this example of Document (18) (for the

reasons disclosed at point 1 above). Hence, the level of detergency and softening achieved by the presently claimed liquid detergent compositions (i.e. the level of those properties which are related to the technical problem explicitly addressed in the patent in suit, see above point 3.1) is expected to be comparable to that achieved in the relevant prior art.

4.3.1 However, the Respondents have argued, on the basis of the disclosure at paragraphs 11, 13 and 18 of the patent in suit, that the liquid detergent composition of the invention would provide the unexpected additional advantages of comprising self-size-limiting molecular aggregates and/or of being transparent or translucent.

4.3.2 The Board stresses that, in general, alleged additional advantages may be considered in the identification of the technical problem credibly solved by the claimed subject-matter only if these advantages were credible (see, for instance, The Case Law of the Boards of Appeal of the EPO, 4th Edition, 2001, I.D.4.4). In the case of advantageous properties stated in a patent as granted this implies, *inter alia*, that no doubts as to the actual existence of these advantages over the whole claimed range should be apparent from the patent itself.

The above argument of the Respondent is instead based on paragraphs of the patent in suit that expressly disclose as optional the characteristics of comprising self-size-limiting molecular aggregates and/or of being transparent or translucent. Indeed, the cited paragraphs indicate only the **possibility** that the liquid detergent composition may comprise self-size-

limiting molecular aggregates and may display transparency/translucency (see in paragraph 11 "*… the detergent composition of the invention … when contacted with water* ***may*** *be solubilised partially in the form of self-size-limiting molecular aggregates…*", in paragraph 13 "***Suitably*** *the fabric softening compound and detergent surfactant form a transparent mix when in the liquid form. However, addition of further detergent ingredients* ***may*** *cause the composition to become cloudy."* and in paragraph 18 "*If liquid the detergent compositions according to the invention* ***may*** *be translucent.*", emphases added by the Board). Since these characteristics are not disclosed in the patent in suit as necessarily present in all the claimed liquid detergent compositions, it is self evident that they cannot possibly represent or result in a technical advantage credibly existing over the whole claimed range and, already for this reason, cannot be used in the definition of the technical problem credibly solved by the (whole) claimed subject-matter.

4.3.3 Therefore the Board concludes that the only technical problem related to that explicitly defined in the patent in suit (see above point 3.1) and which may be regarded as credibly solved by the liquid detergent compositions of claim 1 of the present request over the whole claimed range vis-à-vis the solid one disclosed in example 3 of Document (18), is that or providing further compositions with excellent detergency and softening properties, i.e. an alternative to this prior art.

4.3.4 The Board considers it appropriate, under the particular circumstances of this case, to express some additional considerations concerning the **hypothetical** case that the above-identified paragraphs of the description relied upon by the Respondents would instead had stated that all the liquid detergent compositions according to present claim 1 would comprise self-size-limiting aggregates and/or be transparent/translucent.

The Board wishes to stress that in general only those properties which are directly expressed by the specific technical problem initially set out in the description or recognisable as implied or related thereto may be relevant for the definition of the technical problem credibly solved by the claimed subject-matter vis-à-vis the relevant prior art (see, for instance, The Case Law of the Boards of Appeal of the EPO, 4th Edition, 2001, I.D.4.5, the first two full sentences).

This applies also to the hypothetical case under consideration, in which the patent description would disclose that the presently claimed liquid detergent compositions would have the additional characteristics of comprising self-size-limiting aggregates and/or be transparent/translucent.

The Board notes in particular that this latter characteristic (i.e. the transparency/translucency) is not mentioned in the patent in suit to be related to the technical problem explicitly defined at paragraph 8 and has no self-evident connection with the detergency and/or softening performance of the compositions. Thus, this characteristic would not be recognisable as

implied or related to the technical problem expressed in the patent in suit and, hence, could not be relevant for the definition of the technical problem credibly solved by the claimed subject-matter.

Regarding the remaining characteristic of comprising self-size-limiting aggregates (hypothetically present in all claimed liquid detergent compositions), the Board notes that paragraphs 11 and 18 of the patent in suit disclose that the self-size-limiting aggregates formed during the dilution of the detergent compositions of the invention are the structural elements presumably responsible for the advantageous detergent and softening properties of all (i.e. liquid as well as solid) the compositions of the invention as disclosed in the patent as granted (see the portions of paragraphs 11 and 18 already cited above and the final sentence of paragraph 18 which reads "*…It is thought that it is this new structure of the fabric softening system within the detergent composition that overcomes the problems of the prior art.*"). Hence, this characteristic is manifestly suggested to be related to the technical problem defined in the patent in suit. However, taking into account the identity between the solid compositions of the invention (which according to the patent itself would also necessarily produce the self-size limiting aggregates upon dissolution in water) and the solid detergent compositions disclosed in example 3 of Document (18) (see point 1), it appears that such structural elements should also be necessarily formed when dissolving in water the solid detergent composition of example 3 of Document (18). Therefore, any effect on the level of detergency and softening possibly resulting from the presence of these

aggregates in the presently claimed liquid composition should also be observed when washing with the solid composition exemplified in Document (18). Accordingly, the presence of self-size-limiting aggregates in the claimed subject-matter could not possibly result in any particular technical effect vis-à-vis the relevant prior art.

Hence the Board concludes that, even in the hypothetical case under consideration, the characteristics referred to by the Respondents would not contribute elements relevant for the definition of the technical problem credibly solved by the claimed subject-matter vis-à-vis example 3 of Document (18).

4.4 It therefore remains to be considered whether the claimed subject-matter represents an obvious solution to this technical problem.

Since, as has already been indicated above in point 4.2, liquid compositions are explicitly mentioned among the several forms disclosed in Document (18) for the detergent compositions of this prior art and, in particular, in view of the fact that excellent detergent and softening properties are also expressly indicated to have been achieved in examples 1 and 4 of Document (18) describing liquid detergent compositions, it is apparent that the performance of the liquid and the solid form of the detergent compositions of this prior art based on the same active ingredients are disclosed to be substantially equivalent.

Moreover, it is undisputed by the parties that the modification of a solid detergent composition so as to

arrive at its liquid equivalent represents a routine operation for the skilled detergent formulator.

Therefore, the disclosure in this citation of both solid and liquid detergent compositions as substantially equivalent in terms of the achieved cleaning and softening levels also suggests to the skilled person who is searching for a solution to the existing technical problem, the additional possibility of a routine modification of e.g. the solid detergent composition disclosed in example 3 in the corresponding liquid form.

Hence, the subject-matter of claim 1 under consideration represents an obvious alternative to the prior art in Document (18).

4.5 Thus, the Board concludes that the subject-matter of claim 1 according to Auxiliary request V does not involve an inventive step and, therefore, that also this request does not comply with the requirements of Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent No. 0 862 609 is revoked.

The Registrar: The Chairman:

G. Rauh P. Krasa