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D E C I S I O N
of 14 April 2005

Case Number: T 0976/00 - 3.3.6

Application Number: 95900136.3

Publication Number: 0679180

IPC: C11D 17/00

Language of the proceedings: EN

Title of invention:
Concentrated surfactant compositions

Applicant:
HUNTSMAN INTERNATIONAL LLC

Opponent:
-

Headword:
Amphoteric surfactant composition/HUNTSMAN

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
"Inadmissible amendment of the claims (main and auxiliary request) - yes: no support in the application as filed"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0976/00 - 3.3.6

D E C I S I O N
of the Technical Board of Appeal 3.3.6
of 14 April 2005

Appellant: (Applicant)
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 5 September 2000 refusing European application No. 95900136.3 pursuant to Article 97(1) EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

I. This appeal lies from the decision of the Examining Division to refuse the European patent application No. 95 900 136.3 because amended claim 1 according to the then pending only request did not comply with the requirements of Article 123(2) EPC.

II. This claim 1 read:

"*1. An amphoteric surfactant composition, consisting essentially of at least 5% and not more than 65% by weight of water; at least 25% by weight of amphoteric surfactant; and 5 to 45% of a water-miscible, non-surfactant organic solvent; and optionally up to 10% by weight of the composition of non-colloidal electrolyte and up to 5% by weight of the surfactant of surfactants other than amphoteric surfactant: characterised in that the concentration of surfactant in said composition corresponds to that at which the composition exists in the "L_1" or, at least predominantly, in the "G" phase and said solvent is ethylene or propylene glycol or a water-soluble polyglycol, or a water-soluble ethoxylated C_{1-4} alcohol, or dipropylene glycol monomethyl ether, provided that when the composition is in the "G" phase the amount of water does not exceed 45% and the amount of said surfactant is at least 30%.*"

III. The Examining Division found that the disclosure of the patent application as originally filed provided no basis for the added feature "*up to 10% by weight of the composition of non-colloidal electrolyte*". In particular, (see item "1" of the decision under appeal) the expression "*up to 10% by weight*" was found to

encompass also the concentration "*10% by weight*", while the values disclosed for the undesirable non-colloidal electrolyte ingredient in the original patent application were all below 10% by weight. This applied also to the original wording at page 16, lines 14 to 18 of the application as published (see "*We …… prefer that the proportion of non-surface active electrolyte present in the compositions of the present invention is* ***below 10% …… by weight*** *of the active mixture……*", emphasis added by the Board).

Moreover, the Examining Division found questionable whether the expression "*active mixture*" in the above-cited wording identified the total "*composition*", or rather the surfactant mixture only (see item 2 of the decision under appeal).

IV. The Applicant (hereinafter Appellant) lodged an appeal against this decision and filed with the statement setting out the grounds of appeal two sets of claims respectively labelled as main and auxiliary request. It requested reimbursement of the appeal fee and oral proceedings in the event that the Board of Appeal would not grant a patent based on any of the two requests.

V. Claim 1 of the main request is identical to that refused by the Examining division (see above item II).

Claim 1 of the auxiliary request differs from the corresponding claim of the main request only in that the wording "*optionally up to 10% by weight of the composition of non-colloidal electrolyte*" is replaced by "*optionally less than 10% by weight of the composition of non-colloidal electrolyte*".

VI. The Board summoned the Appellant for oral proceedings to be held on 14 April 2005 and sent enclosed with the summons a communication conveying the provisional opinion of the Board.

VII. The Appellant stated in a Facsimile of 4 March 2005 the intention not to be represented at the hearing and to inform the Board if it changed its opinion for any reason.

VIII. Oral proceedings were held as scheduled in the absence of the Appellant. At their end, the Chairman announced the decision of the Board.

IX. The Appellant's arguments submitted in writing can be summarized as follows.

In respect of the compliance of claim 1 of the main request with the requirements of Article 123(2) EPC, it argued that the expression "*below 10% by weight*" disclosed in the published patent application at page 16, lines 14 to 18, (see above item III) provided support for the expressions "*up to 10% by weight*" added in such claim.

The Appellant maintained that the amount ranges defined by these expressions differed only for the dimensionless point on a scale "*10%*", having no physical existence. On the other hand, a composition containing 10% of a component would also be an abstraction in view of the limit of accuracy of any measuring method. Hence, writers of patent applications

would regard the two expressions under consideration as synonyms.

Thus, the Appellant refuted the formulation "*up to less than 10% by weight*" (suggested by the Examining Division) as tautological and, therefore, confusing combination of the synonyms "*up to 10% by weight*" and "*less than 10% by weight*".

It also stressed the emphasis given in the decision under appeal to the fact that the non-colloidal electrolyte would be defined in the patent application as an undesirable ingredient for which only concentrations below 10% by weight would be specifically disclosed.

The Appellant concluded that the decision of the Examining Division was illogical in that it denied fundamental axioms of mathematics by maintaining that two quantities differing by an amount of zero would not be the same and by attributing to the quantitative definition of the non-colloidal electrolyte amount a special meaning in view of the undesirable nature of such ingredient. This lack of logic of the decision would also justify the remittal of the appeal fee.

With regard to the compliance of claim 1 of the auxiliary request with the requirements of Article 123(2) EPC, it provided no argument in the grounds of appeal in reply to the additional observation contained in item 2 of the appealed decision (see above item III), nor replied to the corresponding objections expressed in item 5 of the

communication of the Board enclosed with the summons to the oral proceedings.

X. The Appellant has requested that the decision under appeal be set aside and a European patent be granted on the basis of the set of claims of the main request or alternatively of the auxiliary request, all requests submitted with the statement setting out the grounds of appeal.

Reasons for the Decision

Claim 1 of the main request

1. *Article 123(2) EPC*

1.1 Article 123(2) EPC prohibits amendments of a European patent that result in the extension of its subject-matter beyond the content of the application as filed. It is the case law of the Boards of Appeal that this content only encompasses what can be directly and unambiguously deduced from the disclosure of the application as filed (see e.g. the Case Law of the Boards of Appeal of the EPO, 4th edition, III.A.3.3, page 219, second paragraph).

1.2 Claim 1 of the main request undisputedly differs from claim 1 of the original patent application *inter alia* for the expression limiting the amount of optional non-colloidal electrolyte ingredient to "*up to 10% by weight of the composition*".

1.3 The Appellant has maintained that this amendment would be based on the original disclosure in the patent application (at page 16, lines 14 to 18, see above item III) of an amount of non-colloidal electrolyte ingredient "***below 10% by weight***" of the active mixture. In particular, it considered the value range defined by the latter expression substantially identical to that defined by "***up to 10% by weight***" in present claim 1, despite the fact that only the latter encompassed the limit-value "*10% by weight*". In the Appellant's opinion, this substantial identity would derive from the fact that this limit-value would correspond to a dimensionless point on a scale. Therefore, a composition containing exactly such amount of non-colloidal electrolyte would be a hypothetical abstraction. Even compositions with a nominal value of 10% of a component would indicate a range, rather than exactly this amount, because of the limited accuracy of the analytical method used.

Hence, the Appellant's reasoning is clearly based on the assumption that "*10% by weight*" would identify exclusively the endlessly exact real number expressing the **non-measurable** abstract value of the continuously variable parameter "weight percent", which could also be tentatively identified e.g. by the notation "*1.00000…… x 10^{1}% by weight*" wherein the dots indicate an infinite sequence of zeros.

1.4 However, no evidence or argument supporting this assumption has been provided by the Appellant.

The Board considers, instead, that compositions of matter are normally disclosed in patents (but the same

occurs also in scientific research publications, technical handbooks, etc. in the field of applied chemistry) by means of figures expressing either a specific single value or the end-value of a range for continuously variable physical-chemical parameters (e.g. ingredient weights) or for their relations (e.g. ingredient weight percentages). Hereinafter these values are indicated as "DVs" = "distinguishing values".

The Board observes that such DVs are normally regarded as **experimentally distinguishable characteristics** of chemical compositions.

Since, as observed by the Appellant too, experimentally measured values of continuously variable parameters cannot be dissociated from the error margin of the method used for measuring them (see also, for instance, the unpublished decisions T 594/01 of 30 March 2004, item 4.1.5 of the reasons, and T 942/01 of 12 August 2004, item 2.1 of the reasons) it is, therefore, also evident the DVs defining measurable parameter values must necessarily be associated to an acceptable error margin. Of course, the same holds for DVs (such as weight percent) to be determined by calculation from actually measured parameters (such as weight).

1.4.1 Even the frequent fact that, as in the present case, a patent or a patent application discloses a conventional DV (such as weights or weight percents of its ingredients) without indicating any specific method for measuring the relevant parameter (and thus the acceptable error margin associated thereto), does not represent a reason for concluding that such DV must represent an exact - and, thus, non measurable - value.

The Board is of course aware that, in the absence of an explicit indication of the measuring method in a patent application, interpretation of parameter ranges in view of clarity or novelty may sometimes be problematic (e.g. when several different methods of different precision are conventionally used for measuring the same parameter, or when the DV refers to a novel unconventional parameter, etc.) and that measuring may always be associated to a grey area where it is difficult to decide whether or not a measured value is according to a DV given in a patent disclosure (see, for instance, the unpublished decision T 412/93 of 21 November 194, item 60 of the reasons). Even the possibility of rounding off more precisely measured values is to be considered under the specific circumstances of the case (see the unpublished decisions T 74/98 of 19 December 2000, item 3.2 of the reasons).

However, in the present case the relevant question is neither to establish whether or not a specific prior art measured value corresponds to a given DV nor to identify precisely all the possible experimentally measurable values which could be associated to a certain DV, but rather to establish if at least one value resulting from conventional weight measurements inclusive of their error margins may be considered to correspond to a DV of "*10% by weight*".

1.4.2 In this respect, the Board observes that the disclosure of a chemical composition by means of a conventional DV is neither written by nor addressed to a mathematician, but rather to a skilled chemistry practitioner who

reasonably knows which method is **conventionally used for measuring that parameter**. Therefore, in the absence of any explicitly disclosed method for measuring a certain conventional DV, it is reasonable to assume that each person skilled in the art would disclose a composition in his own patent application (or interpret such disclosure in patents of other inventors) implicitly associating to such conventional DV the error margin that renders such parameter value distinguishable by means of the measurements that he carries out routinely in his own laboratory. In other words, at least one of such values routinely measured in the skilled person's own laboratory must reasonably be **unambiguously distinctive** of such DV.

For instance, if in a certain technical field it would be conventional to measure weight with a balance with error margin of ± 0.001kg, than the skilled person would consider an experimentally resulting value of 10.000 ± 0.001kg of a certain component (or any more precise value that would certainly remain encompassed within this interval when added or subtracted of its own error margin) as unambiguously distinctive of a DV of "*10kg*" of that component.

1.4.3 Therefore, it is also evident that each skilled person in the present technical field (and, thus, possibly also the author of the present patent application) must reasonably consider at least the experimentally determined weight percent of "*10 ± x% by* weight " of non-colloidal electrolyte, wherein "*x*" identifies the weight percent error margin deriving from that necessarily associated to the method conventionally used for measuring weights, as **unambiguously**

distinctive of the DV of "*10% by* weight" of that ingredient.

This applies, of course, also to the expression "***below** 10% by weight*" disclosed in the patent application as filed. In other words, for the skilled person this expression cannot possibly encompass that conventionally measurable amount of non-colloidal electrolyte of "*10 ± x % by weight*" (or any more precise value that would certainly remain encompassed within this interval when added or subtracted of its own error margin) that he would normally regard as unambiguously distinctive of the DV "*10% by* weight".

1.5 For this reason the Board concurs with the Examining Division that the amount range disclosed by the wording "*up to 10% by weight*" is substantially different from that defined by "*below 10% by weight*", since the latter necessarily excludes at least any compositions with an experimentally determined concentration of the relevant ingredient unambiguously distinctive of the DV "*10% by weight*", while "*up to 10% by weight*" still embraces them.

1.6 Accordingly, the Board concludes that the decision under appeal is not based on any illogical negation of axiomatic truths of mathematics, as alleged by the Appellant, but rather on the substantial difference between the compositions that are actually disclosed by means of the different expressions under consideration as correctly interpreted by the skilled person.

1.7 Finally, the Board observes that the only conclusion derived in the decision under appeal from the fact that

the values disclosed for the undesirable non-colloidal electrolyte are lower than 10% by weight of the active mixture, is that no portion of the application as filed discloses a concentration of 10% by weight of the composition for this undesirable ingredient. This is neither explicitly illogical *per se* nor implies that the Examining Division would have interpreted the same values differently if referring to a desirable ingredient. The Appellant's allegation that this conclusion in the decision under appeal would also be illogical is therefore rejected as manifestly unfounded.

1.8 In view of these reasons, the Board concludes that the subject-matter of claim 1 of the main request violates the requirements of Article 123 EPC and, hence, that this request must be refused.

Claim 1 of the Auxiliary request

2. *Article 123(2) EPC*

2.1 In respect of claim 1 of the Auxiliary request the Board observes that, as mentioned also at item 5 of the communication of the Board enclosed with the summons, already the decision under appeal has indicated that, although the expression used "*less than 10% by weight*" may be considered fully equivalent to "*below 10% by weight*", still the original disclosure at page 16 of the patent application explicitly defines this limit value only in respect of the total weight of the "*active* mixture" (and not of the total "*composition*" as instead required in present claim 1 of the Auxiliary request).

The Board observes also that the last sentence at page 16 comprises the expression "*up to 5% by weight of the active mixture*". The content of this sentence clearly suggests that in the patent application the wording "*active mixture*" refers to the surfactant ingredients only. This is also consistent with the expression "*up to 5% by weight* ***of the surfactant***" (emphasis added by the Board) introduced in claim 1 of this request on the basis of the just cited part of the last sentence at page 16.

Moreover, this interpretation of "*active mixture*" is also consistent with the fact that the adjective "*active*" is used in the whole patent application only with regard to the "*surface active*" ingredients (see, for instance, page 7, lines 5 to 7).

Therefore, the Board concurs with the Examining Division, that the cited portion of the original patent application at page 16 cannot support the definition of "l*ess than 10% by weight* ***of the composition***" (emphasis added by the Board) introduced into claim 1 of the Auxiliary request (see also item 2 of the decision under appeal).

2.2 The Board concludes also that the subject-matter of claim 1 of the auxiliary request violates the requirements of Article 123 EPC and, hence, that the request must be refused.

Appeal fees

3. Since the appeal is dismissed, a reimbursement of the appeal fees, as requested by the Appellant, is not possible.

Moreover, as indicated already at item 4.6 of the communication of the Board, the Board finds, for the reasons given at item 1 above, that the decision under appeal does not contain an error of judgment, let alone a procedural error, which could have justified remittal of the appeal fee.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Rauh P. Krasa