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Datasheet for the decision of 20 May 2019

Case Number: T 0804/16 - 3.3.06

Application Number: 08869466.6

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IPC: C11D3/33, C11D17/00, C11D3/10

Language of the proceedings: EN

Title of invention:
SOLIDIFICATION MATRIX USING AN AMINOCARBOXYLATE

Patent Proprietor:
Ecolab Inc.

Opponents:
The Procter & Gamble Company
Henkel AG & Co. KGaA
Reckitt Benckiser (Brands) Limited

Headword:
Aminocarboxylates/Ecolab

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EPC Art. 54

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Catchword:

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Case Number: T 0804/16 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 20 May 2019

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 27 January 2016 revoking European patent No. 2240563 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: R. Cramer
S. Arrojo

Summary of Facts and Submissions

I. In its statement of grounds of appeal the patentee (from now on "appellant") requested to set aside the decision to revoke European patent Nr. 2 240 563 and to maintain it as granted or, auxiliarly, in amended form on the basis of auxiliary requests 1-7 filed therewith.

II. Claim 1 as granted (main request) reads:

"1. A solidification matrix comprising:
(a) a biodegradable aminocarboxylate, wherein the biodegradable aminocarboxylate is selected from the group consisting of disodium ethanoldiglycine, trisodium methylglycinediacetic acid trisodium salt solution, iminodisuccinic acid sodium salt solution, L-glutamic acid diacetic acid tetrasodium salt, and trisodiumethylenediamine disuccinate, and tetrasodium 3-hydroxy-2,2'- iminodisuccinate;
(b) sodium carbonate; and
(c) water;
(d) wherein the solidification matrix is a hydrate solid, and the actual solidification mechanism of the solidification matrix occurs through ash hydration, or the interaction of the sodium carbonate with water, wherein the hydrate solid has a growth exponent of less than about 3%; and wherein the solidification matrix exclude phosphorus and nitrilotriacetic acid (NTA)."

III. In their replies opponents 2 and 3 (from now on "respondent 2" and "respondent 3") argued inter alia that above claim 1 lacked novelty over the disclosure of D1 (WO 2008/137853 A1) and requested that the appeal be dismissed. Respondent 2 also requested not to admit auxiliary requests 1-7 as late filed.

IV. In response to the Board's preliminary opinion the appellant filed by letter dated 28 March 2019 auxiliary requests 8-10 along with several documents in support of its argument that the priority was validly claimed.

V. Claim 1 of auxiliary request 10 reads:

"A solidification matrix comprising:
(a) 3 % to 16 % of a biodegradable aminocarboxylatc, wherein the biodegradable aminocarboxylate is trisodium methylglycinediacetic acid trisodium salt solution;
(b) 45 % to 65 % of sodium carbonate; and
(c) 2 % to 35 % of water;
(d) wherein the solidification matrix is a hydrate solid, and the actual solidification mechanism of the solidification matrix occurs through ash hydration, or the interaction of the sodium carbonate with water, wherein the hydrate solid has a growth exponent of less than about 3 %; and wherein the solidification matrix exclude phosphorus and nitrilotriacetic acid (NTA)."

VI. Respondent 2 requested not to admit auxiliary requests 8-10 as late filed.

VII. At the oral proceedings the discussion focused on assessing novelty in view of document D1.

After closure of the debate, the appellant requested to set aside the decision and to maintain the patent as granted (main request) or, auxiliarly, on the basis of one of auxiliary request 1-7 filed with the statement of grounds of appeal; or auxiliary requests 8-10 filed with letter dated 28 March 2019.

The respondents requested that the appeal be dismissed.

Reasons for the Decision

1. Main Request - Novelty

The Board has arrived to the conclusion that the ground of opposition under Article 100(a) EPC in relation with Article 54 EPC prejudices the maintenance of the patent as granted for the following reasons.

1.1 Document D1 discloses:

i) Binding agents for forming solid compositions (i.e. a "solidification matrix") which include an aminocarboxylate, an alkalinity source such as sodium carbonate and water (page 24, lines 12-14);

ii) with the aminocarboxylates being biodegradable and including in particular disodium ethanoldiglycine, trisodium methylglycinediacetic acid trisodium salt, iminodisuccinic acid sodium salt, L-glutamic acid diacetic acid tetrasodium salt, tetrasodium 3-hydroxy-2,2'-iminodisuccinate and sodium salt of ethylenediaminedisuccinic acid (page 24, line 24 - page 25, line 12);

iii) wherein the solidification mechanism of the binding agent occurs through ash hydration or interaction of the sodium carbonate with water; with the aminocarboxylate acting as solidification modifier (page 27, line 19 - page 28, line 2), and wherein the solidification modifier provides dimensional stability to the end product. According to page 28, lines 13 -19, a solid is considered to have dimensional stability if it has a growth exponent of less than about 3%;

iv) and wherein the binding agent and resulting solid detergent composition may also exclude phosphorus or nitrilotriacetic acid (NTA) containing compounds, to make the solid detergent composition more environmentally acceptable (page 28, lines 28-30).

1.2 Point 1.1 i) represents a general description of the aminocarboxylate containing binding agent (i.e. the "solidification matrix"). It is noted that while sodium carbonate is described in the general embodiment of page 24 as an example of alkalinity source, it is regarded as the most preferred alternative, since this substance is the only one exemplified and is present in all the compositions of document D1 (AB-AV in table 3), and is moreover part of the solidification mechanism of the binding agent disclosed at page 27, lines 19-21 of D1.

1.3 Point 1.1 ii) describes the preferred aminocarboyxylates, which correspond to those defined in part (a) of claim 1.

1.4 Points 1.1 iii) and iv) are regarded as specific preferred embodiments of the general disclosure of the binding agents in point 1.1 i), because the features described therein are presented as implicit, desirable or positive aspects of the invention and they explicitly refer to the binding agents. The features disclosed in these points thus anticipate part (d) of claim 1.

1.5 It follows from the above considerations that the features of D1 as reported in points 1.1 i),ii),iii) and iv) above directly and unambiguously anticipate the subject-matter of claim 1.

1.6 The appellant argued that features 1.1 i)-iv) corresponded to independent optional embodiments and that, consequently, the only way to arrive at the subject-matter of claim 1 would be to combine these alternatives. In particular, it held that the expressions "can also" and "may also" (referring to the dimensional stability and the absence of NTA and phosphorus (see 1.1 iii) and 1.1 iv) above)) were indicative of the optionality of these features and of the fact that they could only be read in combination with the other embodiments by means of a purposive selection. The subject-matter of claim 1 would therefore be novel in view of document D1.

1.7 The Board cannot agree with this argumentation for the following reasons:

1.7.1 While the expressions "can also" and "may also" imply that the concerned features are facultative, combining general embodiments with optional features does not, as such, equate to a selection from a list of alternatives, in particular when the disclosure indicates that these features relate to preferred embodiments. In this respect the Board notes that, unlike in cases where a selection has to be made from two or more lists of alternatives, in the present case the combination of generic embodiments with preferred features is regarded as a clear and unambiguous disclosure for the purpose of assessing novelty.

1.7.2 The Board further considers the dimensional stability of D1 (i.e. the growth exponent of less than 3%) in point 1.1 iii) above) to represent a preferred embodiment, because it is described as a result from the use of aminocarboxylates as solidification modifier (see page 27, line 19 - page 28 line 19). This is also

apparent from table 5, which underlines the fact that all the exemplary solid compositions (AB-AV) of D1 give rise to "dimensional stability".

1.7.3 The absence of phosphorus and NTA, as presented in point 1.1 iv) above, is also regarded as a preferred embodiment, because it is clearly described as advantageous from an environmental point of view (i.e. "to make the solid detergent composition more environmentally acceptable"). In this respect, document D1 can be considered to implicitly include two alternatives (i.e. compositions with or without NTA/ Phosphorus) and to explicitly disclose the absence of NTA/Phosphorus as the most preferred of the two. This idea is further reinforced by the fact that none of the compositions AB-AV explicitly includes any of these substances.

1.8 The Board therefore concludes that the subject-matter of claim 1 is directly and unambiguously disclosed in D1, and thus not novel.

2. Auxiliary request 1 - Novelty

2.1 Claim 1 of this request corresponds to that of the main request with a disclaimer of the specific composition AN in table 3 of D1.

2.2 Since document D1 includes a broader disclosure of the solidification matrix composition (namely the disclosure in pages 24 and 28 presented in point 1.1 above and used in the discussion of the main request) than the specific composition AN which clearly anticipates the subject-matter of claim 1, the disclaimer does not suffice to re-establish novelty with respect to this document.

2.3 The Board therefore concludes that the subject-matter of claim 1 is not novel in view of document D1 and that, consequently, auxiliary request 1 is not allowable under Article 54 EPC.

3. Auxiliary request 2 - Novelty

3.1 Claim 1 of this request corresponds to that of the main request with the following amendments (in bold):

- The solidification matrix comprises **3-16%** of aminocarboxylate, **45-65%** of sodium carbonate and **2-35%** of water.

3.2 Since document D1 (page 24, lines 20-22) directly and unambiguously discloses a binding agent having 3-16% aminocarboxylate, 2-20% water and 45-65% alkalinity source (carbonate salt or sodium carbonate), the ranges defined in claim 1 are not considered to convey novelty with respect to this disclosure, because while the top end-values for the water content are different (35% in claim 1 versus 20% in D1), the bottom end value of 2% in document D1 is the same as in claim 1, which effectively implies that the water content range in this document anticipates that defined in claim 1.

3.3 The Board has therefore concluded that the subject-matter of claim 1 is not novel in view of document D1 and that, consequently, auxiliary request 2 is not allowable under Article 54 EPC.

4. Auxiliary request 3 - Novelty

4.1 Claim 1 of auxiliary request 3 corresponds to a combination of those of auxiliary requests 1 and 2.

4.2 The same arguments and conclusions as presented for auxiliary requests 1 and 2 apply therefore to this request, which is thus not considered to be allowable under Article 54 EPC.

5. Auxiliary request 4 - Novelty

5.1 Claim 1 of auxiliary request 4 is identical to that of auxiliary request 2.

5.2 The same arguments and conclusions as presented for auxiliary request 2 apply therefore to this request, which is thus not considered to be allowable under Article 54 EPC.

6. Auxiliary request 5, 6 and 7 - Novelty

6.1 Claim 1 of auxiliary requests 5, 6 and 7 corresponds to that of auxiliary request 3 (i.e. to a combination of claims 1 of auxiliary requests 1 and 2).

6.2 The same arguments and conclusions as presented for auxiliary requests 1 and 2 (or auxiliary request 3) apply therefore to these requests, which are thus not considered to be allowable under Article 54 EPC.

7. Auxiliary request 8 - Novelty

7.1 In claim 1, feature (a) of this request the specific embodiment "iminodisuccinic acid sodium salt solution" has been deleted. The claim is otherwise identical to that of the main request.

7.2 The deletion of one of the options in feature (a) does not as such convey novelty in view of document D1, because all the aminocarboxylates defined in claim 1

point (a) are clearly and unambiguously described in document D1 (page 24, line 24 - page 25, line 12).

7.3 The Board therefore concludes that the same arguments and conclusions as brought forward for the main request apply to this request, which is thus not considered allowable under Article 54 EPC.

8. Auxiliary request 9 - Novelty

8.1 Claim 1 of this request corresponds to a combination of those of auxiliary requests 2 and 8.

8.2 The Board therefore concludes that the same arguments and conclusions as presented for these auxiliary requests apply to this request, which is thus not considered to be allowable under Article 54 EPC.

9. Auxiliary request 10 - Novelty

9.1 In claim 1 of this request all the alternatives in point (a) except "trisodium methylglycinediacetic acid trisodium salt solution" have been deleted. The claim is otherwise identical to that of auxiliary request 2.

9.2 For D1 to anticipate point (a) it is now necessary to select trisodium methylglycinediacetic acid trisodium salt from the list of alternative aminocarboxylates defined in the passage at page 24, line 24 - page 25, line 12 of this document. While this represents a selection from a list, as brought forward in the novelty assessments of the main request and auxiliary request 2 there is no need to make any further selection from a list to anticipate the subject-matter of claim 1, because the rest of the features of claim 1 are described as preferred features in document D1.

9.3 Contrary to the argumentation of the appellant, an element selected from a single list is generally regarded as a clear and unambiguous disclosure under Article 54 EPC. Furthermore, a disclosure combining an element selected from a list with preferred features/ embodiments is also generally regarded as clearly and unambiguously disclosed, in particular when pointers to the preferred features/embodiments can be identified and these are not themselves part of a long list of alternative preferred features/embodiments.

9.4 The subject-matter of claim 1 is therefore anticipated by document D1 and, consequently, this request is not considered to comply with the requirements of Article 54 EPC in view of D1.

10. Since none of the requests on file complies with the requirements of Article 54 EPC, there is no need to address the other objections of the respondents.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Magliano J.-M. Schwaller

Decision electronically authenticated