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**Datasheet for the decision
of 7 June 2013**

Case Number: T 2489/10 - 3.3.06

Application Number: 04754063.8

Publication Number: 1629077

IPC: C11D 17/04, B65D 81/00

Language of the proceedings: EN

Title of invention:
Detergent pouch

Patent Proprietor:
THE PROCTER & GAMBLE COMPANY

Opponent:
Reckitt Benckiser (UK) Limited

Headword:
Detergent pouch/PROCTER & GAMBLE

Relevant legal provisions:
EPC Art. 52(1)
RPBA Art. 13(3)

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step (main request): yes - non-obvious improvement"
"Late filed evidence and arguments not admitted"

Decisions cited:
-

Catchword:
-



Case Number: T 2489/10 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 7 June 2013

Appellant: Reckitt Benckiser (UK) Limited
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 21 October 2010
rejecting the opposition filed against European
patent No. 1629077 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: B. Czech
Members: P. Ammendola
U. Tronser

Summary of Facts and Submissions

- I. This appeal is from the decision of the opposition division rejecting the opposition against European patent No. 1 629 077.
- II. The patent as granted contains nine claims.

Claim 1 reads:

"1. A multi-compartment detergent pouch having walls composed of a water-soluble or dispersible water-containing polymer film, said pouch having at least one compartment containing a liquid composition and at least one compartment containing a hygroscopic powder composition **characterised in that** the liquid composition comprises a moisture regulator system such that at equilibrium at 40% relative humidity and 21.1°C (70°F) the amount of water in the film is within 30% of that of the native film, and wherein the moisture regulator system comprises a C2-C6 monoalkylene polyol or a mixture thereof and a polyalkylene glycol, glycol ether, glycol ester or a mixture thereof in a weight ratio of from about 1:3 to about 1:20."

Claims 2 to 6 define preferred embodiments of the pouch according to claim 1.

Claim 7 differs from claim 1 in that its characterising portion reads:

"characterised in that the liquid composition comprises a moisture regulator system comprising by weight of the system: a) from 4 to 40% of a C2-C6 monoalkylene polyol or a mixture thereof; b) from 30 to 80% of a polyalkylene glycol glycol ether, glycol ester or a mixture thereof; and c) from 5 to 30% of water."

The remaining dependent claims 8 and 9 define preferred embodiments of the pouch according to claim 1 and of the pouch according to claim 7.

For the sake of brevity, **multi-compartment detergent pouches** (such as those defined in claims 1 and 7) separately comprising a **liquid composition** and a **hygroscopic powder composition**, are hereinafter referred to as **"MC L/P pouches"**. Similarly, the **water-containing polymer film** making up the pouch compartments that is **water-soluble** or **dispersible** is hereinafter referred to as **"WCWS film"**; the **moisture regulator system** present in the liquid composition as **"MR system"**; the C2-C6 **monoalkylene polyol component** of the MR system as **"M-component"** and the **polyalkylene glycol, glycol ether or glycol ester component** of the MR system as **"P-component"**.

III. The opponent had sought revocation of the patent in suit only on the ground of lack of inventive step and had cited documents:

D1 = WO 01/61099 A1,

D2 = WO 02/42401 A2

and

D3 = WO 01/83667 A1.

IV. In the decision under appeal the opposition division considered, *inter alia*, that

- the pouches exemplified in document D2 were the closest prior art for the assessment of inventive step with regard to the MC L/P pouch of claim 1;
- the pouches exemplified in document D3 were the closest prior art for the assessment of inventive step with regard to the MC L/P pouch of claim 7, as this citation was the only prior art in which water was comprised in the liquid composition;
- the experimental data filed by the patent proprietor as annexes 1 and 2 substantiated the contention that the subject-matter of claim 1 and that of claim 7 solved, vis-à-vis the respective closest prior art, the technical problem addressed in the patent in suit (paragraph [0005]), i.e. the provision of MC L/P pouches with improved physical strength and, thus, improved storage stability;

and that,

- since neither D2 nor D3 suggested that the particular choice of a combination of M- and P-components could improve the strength of the WCWS film forming the pouches, the subject-matter of claims 1 and 7 solved the posed technical problem

in a non-obvious manner across the whole breadth of claims 1 and 7, respectively.

- V. On 20 December 2010 the appellant (opponent) filed a notice of appeal and paid the appeal fee on the same day. In its statement of grounds of appeal received at the EPO on 19 February 2011, the appellant disputed the findings of the opposition division.
- VI. With its reply, the respondent (patent proprietor) filed two sets of amended claims as auxiliary requests and submitted that the claimed subject-matter was inventive.
- VII. By letter posted on 27 March 2013 the board summoned the parties to oral proceedings to be held on 7 June 2013.
- VIII. With a letter of 7 May 2013 the respondent filed eight sets of amended claims as auxiliary requests 1 to 8.
- IX. With a letter of 7 May 2013 the appellant filed documents:

D4a = A technical brochure of Clariant entitled "*Polyethylenglykole*"; Edition 1998, pages 6, 7, 14 and 15,

and

D4b = A technical brochure of Clariant entitled "*Polyalkylen-/ Polyethylenglykole*"; Edition 2007, pages 6, 7, 30, 32 and 33,

two further prior art documents labelled as D5 and D6, and a document labelled Annex 3 and containing statements regarding the disclosure of said document D5. In the same letter it also announced the filing of further evidence to prove that the ingredient "*Duramyl*" mentioned in examples 2 and 3 of document D2 comprised glycerol and water.

With a letter of 21 May 2013 the appellant filed document

D7 = A letter from "Novozymes A/S" dated 13 May 2013, stating that the product marketed as "*Duramyl 300 L, Type DX*" was an aqueous solution comprising propylene glycol,

and with a letter of 4 June 2013 it filed document

D7a = A letter from "Novozymes A/S" dated 4 June 2013, stating that any customer requesting on 2 June 2003 to purchase "*Duramyl*" liquid for Household Care applications would have been supplied with "*Duramyl 300 L, Type DX*" by default.

X. At the oral proceedings held before the Board on the scheduled date, the appellant withdrew its previous request to introduce documents D5, D6 and Annex 3 into the proceedings.

The debate essentially focussed on the issue of inventive step with regard to the claims as granted.

XI. The appellant requested that the decision under appeal be set aside and that the European be patent revoked.

The respondent requested that the appeal be dismissed or, alternatively, that the patent be maintained in amended form on the basis of one of the auxiliary requests 1 to 8 submitted with the letter dated 7 May 2013.

XII. As relevant here (main request, claims as granted) the parties' arguments concerning the issue of inventive step can be summarised as follows.

The **appellant** argued that documents D4a, D4b, D7 and D7a, although only filed after the oral proceedings had been arranged, were nevertheless admissible because they supported two very relevant arguments as to the absence of a technical improvement of the subject-matter of claims 1 and 7 vis-à-vis the prior art.

In particular,

i) documents D4A and D4b proved that the broad definition of the P-component in claims 1 and 7 encompassed not only polyethylene glycols of any molecular weight and, thus, also those of high molecular weight and correspondingly low hygroscopicity and water solubility, but also polypropylene glycols which were mostly water-insoluble and non-hygroscopic. Hence the experimental data of Annexes 1 and 2 (based on tested M- and P-components which were highly hydrophilic) were insufficient to prove the achievement of a technical advantage across the full scope of the

patent claims (this objection is hereinafter referred to as "**D4-based objection**");

and

ii) since documents D7 and D7a demonstrated that the ingredient "*Duramy1*" used according to examples 2 and 3 of document D2 comprised propanediol (as well as water), and since no effect was associated with the weight ratio between the M- and the P-component cited in claim 1 (or that implied by the weight percentages given in claim 7), the sole technical problem credibly solved by the claimed subject-matter vis-à-vis these examples of document D2 was the provision of a mere alternative (this objection is hereinafter referred to as "**D7-based objection**").

The appellant also argued that, even if the D4-based and the D7-based objections were not to be admitted by the board, the comparative experimental data provided by the respondent in annexes 1 or 2 did not conclusively demonstrate the occurrence of a superior strength of the claimed pouches across the whole breadth of claim 1 or of claim 7 for the following reasons:

Firstly, these claims allowed for unlimitedly small, hence ineffective, amounts of MR system in the liquid composition and, thus, also for unlimitedly small amounts of the M- and P-components. Secondly, claim 1 and 7 encompassed embodiments of the invention only minimally differing from the MC L/P pouches of the prior art disclosed in any of documents D1, D2 or D3. Thirdly, the comparative examples referred to in

annexes 1 and 2 were at most related to the examples of documents D2 and D3, but not representative of the prior art disclosed in document D1.

Thus, there was no reason to expect that the subject-matter of claims 1 or 7 provided over the whole claimed breadth superior film strength vis-à-vis the example of document D1, which, in the appellant's opinion, aimed at solving the same technical problem as that addressed in the patent in suit and, hence, represented the closest prior art. Accordingly, the only technical problem credibly solved over the whole breadth of claims 1 and 7 was the provision of an alternative to the MC P/L pouches exemplified in document D1.

Document D1 itself already suggested the possible presence in the liquid composition of solvents which neither dissolved nor damaged the material making up the pouch (D1: page 5, lines 6 to 9) and also mentioned propylene glycol among the possible enzyme stabilisers (D1: page 68, line 4 from the bottom). Hence, it was obvious to solve the posed technical problem by, for instance, additionally incorporating into the pouch according to the example of document D1 small amounts of any other ingredients not apt to damage the WCWS film. Thus, a skilled person would arrive at the subject-matter of claims 1 and 7 upon considering document D1 either *per se* or in combination with the disclosure, in document D2, of a mixture of M- and P-components as possible humectants for MC L/P pouches.

It was also apparent that claims 1 and 7 allowed for pouches wherein the liquid composition was only minimally different from that present in the pouches of

e.g. examples 2 or 3 of document D2 in which dipropylene glycol (i.e. a P-component according to the patent in suit) was already used as a "moisture sink" for stabilising moisture-sensitive ingredients (D2: page 6, second and third paragraphs). Hence, even if the skilled person started from document D2, the sole technical problem credibly solved across the whole breadth of claims 1 and 7 remained the provision of alternative MC L/P pouches.

The solution proposed in claim 1 was obvious for the skilled reader of document D2 *per se*, because this citation explicitly suggested not only humectant mixtures of e.g. sorbitol, glycerol and/or dipropylene glycols or mixtures of glycols and polyethylene glycols (D2: page 6, line 30, to page 7, line 4) but also the possibility of incorporating in the liquid composition other ingredients (D2: page 8, last paragraph), e.g. enzyme stabilisers or carrier solvents such as propylene glycol (D2: page 20, lines 6 to 18). In particular, to arrive at the subject-matter of claim 1 the skilled person only needed to modify the examples in D2 according to the explicit instruction on page 20, line 9, of the same document to use propylene glycol as enzyme stabiliser at a level of up to 6% of the liquid composition.

Considering the explicit indication in document D2 as to the possible presence of a limited amount of water (D2: page 3, lines 26 to 28) in combination with the other above-mentioned teachings in this citation, it was apparent that document D2 also rendered it obvious to add a controlled amount of moisture in the liquid composition. Thus, the low water levels required by

claim 7 of the patent in suit also resulted from an obvious optimisation of the teachings of this citation. Hence, the subject-matter of this claim was also rendered obvious by the disclosure of document D2 *per se*.

If, however, the board were to consider the data in annexes 1 and 2 sufficient to prove the alleged superior strength of the claimed subject-matter vis-à-vis examples 2 or 3 of document D2 across the whole breadths of claims 1 and 7, this advantage was at most to be considered a "bonus effect" inevitably obtained when following the explicit instruction on page 20, line 9, of document D2 to use propylene glycol as enzyme stabiliser at a level of up to 6% of the liquid composition.

Finally, if the objective technical problem faced by the person skilled in the art were to be found in the provision of MC L/P pouches having improved strength even when starting from document D3 as the closest prior art, the subject-matter of claims 1 and 7 would, in the appellant's opinion, still result in an obvious manner from the combination of the examples in document D3 with (one or both of) the teachings in document D2 (already mentioned above) considering

- that mixtures of glycols such as e.g. the mixtures of glycerol with dipropylene glycol and/or polyethylene glycols would provide a good humectant effect which would in turn lead to good strength of the pouches

and

- that a limited amount of water in the liquid compositions was acceptable.

The **respondent** requested the board not to admit any of documents D4a, D4b, D7 and D7a or the new arguments based thereupon in view of their belated submission. The respondent felt that in order to be in a position to properly address the D4- and D7-based objections, it would have been necessary to obtain detailed input from technical experts and, possibly, further technical or even experimental data.

According to the respondent, the appellant's interpretation of claims 1 and 7 as encompassing unlimitedly small amounts of the M- and P- components was not technically sensible.

The respondent considered that the data in annexes 1 and 2 sufficiently proved the superior strength of the WCWS film surprisingly provided by the simultaneous presence of M- and P-components in the liquid composition, vis-à-vis comparative examples representative of the prior art disclosed in documents D2 and D3, i.e. vis-à-vis comparative examples containing either

- only the dipropylene glycol (also a P-component) present in examples 2 and 3 of document D2, or
- only the combination of water and propanediol (also an M-component) present in the examples of document D3.

Hence, and in the absence of any evidence to the contrary provided by the appellant, it was reasonable to expect that even those pouches according to claim 1 and claim 7 in which the only difference vis-à-vis the pouches of documents D2 or D3 was the inclusion of

additional, relatively small amounts of M- or P-components, provided gradual, possibly small but nevertheless noticeable improvements of film strength. The respondent also stressed that the appellant had provided no experimental evidence or sound technical reasons credibly supporting its contention that e.g. the MC P/L pouches of document D1 should be expected to be more stable than e.g. those disclosed in documents D2 or D3, corresponding to the comparative examples actually tested in annexes 1 and 2. Hence, there was no reason to presume that the strength of the WCWS film of the claimed pouches would be inferior or similar to that of the prior art pouches disclosed in document D1. In conclusion, the appellant had not made a credible case in support of its unproved allegation that the subject-matter of claims 1 or 7 failed to solve across the whole claimed breadth the posed technical problem vis-à-vis any of the available prior art citations.

Moreover, the respondent emphasised that none of the available citations suggested specifically the use, in the liquid composition, of a combination of M- and P-components in order to improve the strength of the WCWS film or for any other effect possibly beneficial to the storage stability of MC L/P pouches.

Nor would the subject-matter of claims 1 or 7 result from simply following the instructions on page 20, second paragraph, of document D2. To arrive at that subject-matter, it was instead necessary to combine examples 2 or 3 of this citation with, at least, a first selection of the propylene glycol among the possible enzyme stabilisers mentioned on page 20 and a second selection of the amount of 6% disclosed, also on

page 20, as the upper limit of the amount range for such stabilisers. Hence, to arrive at the MC L/P pouches of the invention was no "one way street" and the obtained improvement of the film strength was no "bonus effect".

Hence, none of the appellant's objections with respect to inventive step was well-founded.

Reasons for the Decision

Admissibility of the late-filed documents D4a, D4b, D7 and D7a and of the arguments based thereupon.

1. The appellant requested the board to admit into the appeal proceedings late-filed documents D4a, D4b, D7 and D7a in view of the relevance of the objections that they supported (see point XII above).
- 1.1 The board notes that the D4-based objection was raised for the first time about one month before the oral proceedings and that the only justification offered by the appellant for this course of action was that only during the preparation for the hearing had it noted that the excessive breadth of the definition of the P-component in claims 1 and 7 allowed for the use of not very hydrophilic or even totally hydrophobic ingredients for which no moisture regulating effect was possible.
- 1.2 The board notes further that the D7-objection was also raised for the first time about one month before the oral proceedings and supported by the subsequent filing

of documents D7 and D7a. The only justification offered by the appellant for this course of action was that only a few weeks before the hearing had it become aware of the presence of propylene glycol in the product labelled "*Duramyl*" used in examples 2 and 3 of document D2.

- 1.3 The board notes finally that Article 13(3) RPBA provides that the amendments sought to be made to a party's case after oral proceedings have been arranged shall not be admitted if they raise issues which the board or the other party cannot reasonably be expected to deal with without adjournment of the oral proceedings.

- 1.4 The board finds that the appellant could have raised both objections at an earlier stage of the proceedings. More particularly, neither the assessment of the breadth of a claim which is attacked, nor the assessment of a possible implicit disclosure of a cited prior art document ("*Duramyl*" in document D2) should have been left to such a late stage of the appeal proceedings. The appellant thus did not set out its complete case in the phase of the proceedings preceding the issue of the summons to oral proceedings.

Moreover, the board finds it comprehensible that the respondent felt a need to obtain detailed input from experts in the technology in order to properly address these two new objections, as a result of which it might even have wanted to prepare and submit further experimental data. Hence, the board accepts that the respondent could not reasonably be expected to deal

with any of the two belated objections without an adjournment of the oral proceedings.

- 1.5 Thus, pursuant to the provisions of Article 13(3) RPBA, the board decided not to admit into the appeal proceedings the belated documents D4a, D4b, D7 and D7a and the belated objections based thereupon.

Main Request (patent as granted)

2. Construction of claim 1

- 2.1 Claim 1 defines an MC L/P pouch comprising, in the liquid composition, an MR system such that the amount of water in the WCWS film forming the pouch has to be within 30% of that of the native film and wherein the M- and P-components are in a weight ratio of from about 1:3 to about 1:20 (see point II above).

- 2.1.1 As to the construction of this claim the appellant argued that:

- the expression MR system was neither conventional in the relevant technical fields nor was it defined in the description of the patent in suit,

- the definition as given in claim 1 required the MR system, and not just the M- and the P-components thereof, to ensure the defined water content of the WCWS film; thus, the required film water content could as well be due to other components of the MR system (different from the M- and the P-components)

and

- the claim only set the possible ratio between the mandatory M- and P-components, but did not set any minimum value for their relative amount e.g. in the liquid composition (or even just in the MR system therein).

Thus, in the appellant's opinion, this claim allowed for unlimitedly small amounts of M- and P-components in the liquid composition.

2.1.2 For the following reasons, the board concurs, however, with the respondent that this interpretation of the claim's wording is not technically sensible.

Even disregarding the feature in claim 1 explicitly requiring that the WCWS film have a water content of not more than 30% of that of the native film, it is still apparent from the whole disclosure of the patent in suit that the expression "*moisture regulation system*" and the definition of the two (non-aqueous) mandatory ingredients thereof (i.e. the M- and the P-components) already necessarily imply, in the context of claim 1, that these components must significantly contribute to lowering (and keeping low during the storage of the pouch) the amount of water present in the matter surrounding the liquid composition i.e. in the WCWS film.

If only for this reason, the broadest technically sensible interpretation of this claim necessarily requires that the M- and the P-components contribute in a significant manner to the drop of water content in the film and, thus, requires significant, rather than

arbitrarily small, minimum amounts of these two components to be present in the claimed pouches.

3. Inventive step - Claim 1

3.1 The invention is concerned with the provision of MC L/P multicompartment detergent pouches made of a WCWS film having excellent physical strength and storage stability (see paragraphs [0001] and [0005] of the patent in suit).

3.2 For the board, the closest prior art is document D2, which also relates to MC L/P pouches made of a WCWS film (D2: page 3, lines 12 to 23).

3.2.1 Like the patent in suit, document D2 is concerned with issues relating to the stability of the pouch material. D2 focuses *inter alia* on the impact on the pouch's stability resulting from moisture permeation through the WCWS film and the consequent bleach decomposition into gaseous oxygen (D2: lines 23 to 24 on page 3 in combination with the first paragraph on page 2). Furthermore, among the cited documents D1 to D3, D2 is the document disclosing MC L/P pouches most closely related in terms of their structure and composition to the pouches claimed.

3.2.2 In particular, it is apparent and undisputed that document D2 explicitly qualifies some of the ingredients of the liquid compositions as "humectants" having the function of a "moisture sink", i.e. these ingredients have the same function of lowering and controlling the moisture content in the surrounding matter as the claimed MR system of the patent in suit

(compare document D2, from line 10 of page 6 to line 10 of page 7, with the patent in suit, paragraphs [0011] to [0016]). It is also apparent and undisputed that the humectants described in document D2 include the ingredients used in the patent in suit as M- or P-components of the MR system.

3.2.3 More particularly, for the board, examples 2 or 3 of document D2 constitute the most appropriate starting point for the assessment of inventive step for the subject-matter of claim 1, since the MC P/L pouches described therein contain, in the liquid composition, the humectant dipropylene glycol falling under the definition of P-component in claim 1.

3.3 According to the patent in suit, the claimed invention is concerned with the issue of the loss in strength over time of known MC P/L pouches and, thus, with avoidance of the "*risk of rupture*" - under typical transport and storage conditions - that is especially acute in MC L/P pouches "*containing hygroscopic powders and other compositions prone to absorb water from the environment*" (see paragraph [0004]). The invention aims at providing MC L/P pouches with "*excellent physical strength and storage stability*" (see paragraphs [0003] and [0005]).

Accordingly, starting from D2 (examples 2 or 3) as the closest prior art, the technical problem can be seen in the provision of MC P/L pouches with improved physical strength and storage stability (see also paragraphs [0003] and [0005] of the patent in suit).

3.4 As one solution to said technical problem the patent in suit proposes the MC L/P pouch according to claim 1 at issue, which is characterised in particular by the presence in the liquid composition of an MR system:

a) comprising an M-component and a P-component in a weight ratio of from about 1:3 to about 1:20

and

b) being apt to ensure that the amount of water in the film forming the pouch is within 30% of that of the native film (under the test conditions specified).

3.5 The board is satisfied that the technical problem stated under point 3.4 above is indeed effectively solved by the MC L/P pouch according to claim 1 in view of the following considerations:

3.5.1 The opposition division found that the experimental data provided by the respondent in annexes 1 and 2 (see, in particular, the comparison between the strengths of the pouches according to examples LT1, LT2, LT4 and LT6, all comprising varying amounts of glycerol and dipropylene glycol, and the strength observed in the comparative example LT3, wherein the whole liquid composition consists of dipropylene glycol) substantiated the contention that in the pouches according to claim 1 the WCWS film forming the pouch is endowed with a level of strength that is superior to that obtained in the prior art pouches.

3.5.2 The appellant disputed this finding, arguing that the comparative data provided by the respondent were only

relevant for a part of the claimed subject-matter, namely for pouches wherein each of the M- and P-components were present in relatively large amounts, i.e. constituted a substantial part of the liquid composition and, thus, also of the MR system. Claim 1 also covered, however, embodiments differing only minimally from the pouches of examples 2 or 3 of D2, such as pouches obtained when replacing by an M-component 1/20 of the dipropylene glycol ingredient already present in these prior art examples. Hence, according to the appellant, the respondent had not made a credible case that the superior strength observed in these data could be achieved over the whole breadth claim 1.

3.5.3 The appellant did not, however, provide any conclusive experimental evidence or substantiated theoretical reasoning supporting this argument. The board thus regards it as an unproven allegation, which is not sufficient to discharge the burden of proof resting on the appellant to show that the opposition division erred in this respect.

3.6 Hence, it remains to be decided whether or not the claimed solution was obvious in view of the cited prior art.

3.6.1 More particularly, the question needs to be considered whether the person skilled in the art starting out from the pouches of examples 2 or 3 of D2 and aiming at improving the physical strength and storage stability of these pouches, would have considered using a mixture of M- and P-components, i.e. using an M-component in

addition to or in partial replacement of the single humectant dipropylene glycol component.

3.6.2 The board notes that none of the available documents discloses or suggests that the use of a mixture of M- and P-components would be more effective than the use of just a P-component in promoting the strength of a WCWS film and/or in achieving any other effect possibly related to the storage stability of detergent pouches.

3.6.3 In particular, the only document actually mentioning mixtures of M- and P-components is document D2 itself, which generally addresses (D2: page 6, line 30, to page 7, line 5) the possible use of either a single glycol humectant (such as the dipropylene glycol actually present in examples 2 and 3 of this citation) or:

- mixtures of glycols and polyhydric alcohols such as "sorbitol", "glycerol" and "dipropylene glycol";

or,

- preferably, "mixtures comprising glycols" in general (all M- and P-components being encompassed by this definition).

However, none of these mixtures of humectants disclosed in document D2 is described as superior in any way to e.g. the exemplified alternative making use of a single glycol humectant. Incidentally, the only mixtures that are disclosed in the cited portion of document D2 as being "more" or "especially" preferred are the mixture of "polyethylene glycols of different molecular weights", i.e. mixtures of P-components only.

3.6.4 Hence, the board finds that none of the cited prior art documents suggests using a combination of M- and P- components (let alone a mixture of M- and P- components in the weight ratios prescribed by claim 1) to the skilled person trying to improve the strength of the WCWS film of known MC L/P pouches.

If only for this reason the board concludes that the available prior art does not render it obvious to solve the posed technical problem by modifying examples 2 or 3 of document D2 in a manner leading to the subject-matter of claim 1.

3.6.5 The appellant additionally argued that, even in the absence of any explicit instruction in the prior art making it possible to predict the superior effect of the M- and P-components in combination on the strength of the WCWS film, still this advantageous technical effect would at most be a "bonus effect" inevitably obtained when applying to examples 2 or 3 of document D2 the explicit instruction on page 20, line 9, of the same document to use propylene glycol as enzyme stabiliser at a level of up to 6% of the liquid composition.

The board concurs, however, with the respondent that the subject-matter of claim 1 is not inevitably obtained, or only based on ex post facto considerations, when following said instruction in D2, since this would require the arbitrary selection

a) of "propylene glycol" among the other enzyme stabilisers mentioned in the quoted passage of D2 (i.e.

"calcium ion, boric acid ... and chlorine bleach scavengers"),

b) of the amount of 6% taken from the range "about 0,01 to about 6%" also disclosed in that passage relating to the enzyme stabilisers.

Hence, this argument of the appellant also fails.

3.6.6 For the sake of completeness, the board wishes to stress that the skilled person could not possibly have arrived at the subject-matter of claim 1 in an obvious manner even when starting from document D1 or document D3 as the closest prior art, as also argued by the appellant.

Indeed, even taking one of these citations as the starting point for the sake of argument, the only argument of the appellant for disregarding the relevance of the comparative experimental data in annexes 1 and 2 is the allegation that these data would not suffice as credible evidence that an improved film strength could be achieved over the whole breadth of claim 1, which claim would allow for pouches containing unlimitedly small amounts of the M- and P- components, as well as for pouches only minimally different from the MC L/P pouches exemplified in document D1 or in document D3.

However, the board notes not only that the proper construction of claim 1 excludes the presence of unlimitedly small amounts of the M- and P- components (see point 2.1.2 above), but also that comparative example LT7 in annex 2 is manifestly representative of

the pouches exemplified in document D3 (containing water in the liquid composition). As already discussed above at points 3.5.2 and 3.5.3) the appellant has provided no evidence or substantiated theoretical reasoning in support of the allegation that the comparative data provided by the respondent were only relevant for a part of the claimed subject-matter, namely for pouches wherein each of the M- and P-components were present in relatively large amounts, i.e. constituted a substantial part of the liquid composition and, thus, also of the MR system. Hence, the appellant has not made a credible case that the subject-matter of claim 1 embraces embodiments in which no gradual appreciable improvement might credibly exist vis-à-vis the pouches exemplified in document D1 or D3.

It is thus also apparent to the board that the skilled person starting from any of documents D1 or D3 could not possibly arrive in an obvious manner at the claimed subject-matter if only because, as discussed above, the available prior art does not suggest that an improved strength of the WCWS films may be achieved when the liquid composition of the MC L/P pouches comprises M- and P-components in combination.

This also applies, in particular, to the argument presented by the appellant (in relation to a skilled person starting from the examples of document D3) that the combination of documents D3 and D2 rendered obvious the proposed solution to the problem of improving the storage stability. The board considers that from such combination the skilled person would rather notice that the MC L/P pouches exemplified in document D3 already contain propanediol, i.e. a glycerol that document D2

suggests be used as humectant / moisture sink and, thus, as a means of improving the storage stability of the pouches. Since, as already discussed above at point 3.6.3, the mixtures of M- or P-components possibly specifically disclosed in document D2 (or encompassed in the more general disclosure in this citation) are not described as in any way superior to e.g. the alternative of using a single glycerol humectant, even when reading the documents D3 and D2 in combination, the skilled person has no reason to expect that an improvement of the pouch's physical strength or storage stability could be obtained by replacing the single-component humectant already present in the examples of document D3 by means of mixtures of M- or P- components. Hence, the combination of documents D3 and D2 also cannot possibly render obvious the MC L/P pouches of claim 1.

3.6.7 In the board's judgement, the subject-matter of claim 1 thus involves an inventive step (Articles 52(1) EPC and 56 EPC 1973).

4. Construction of claim 7

4.1 Independent claim 7 as granted is also directed to an MC L/P pouch and differs from claim 1 in that it does not require the MR system to be such as to limit the amount of water in the WCWS film to a value within 30% of the water amount in the native film, but prescribes instead ranges (in percent) for the relative amounts of water and M- and P-components comprised in the MR system (see point II above).

4.2 In respect of this claim too, the appellant has argued that it would allow for unlimitedly small amounts of M- and P-components.

However, since claim 7 also requires that these components form an MR system, the board rules out the construction of the claim's wording proposed by the appellant for substantially the same reasons as indicated at point 2.1.2 above.

5. Inventive step - Claim 7

5.1 For the board, document D2 also represents the closest prior art with regard to the subject-matter according to claim 7, since the pouches of examples 2 and 3 comprise a P-component acting as MR-system.

More particularly, the board does not concur with the finding of the opposition division that the MC L/P pouches of the examples of document D3 had to be considered the closest prior art because they were the only prior art pouches in which water was added in the liquid composition. The board notes not only that some water is necessarily also present in the pouches of document D2 (because the function of the humectant contained therein is to act as a moisture sink, i.e. it must start absorbing water at least as soon as the pouch is formed), but also that the presence of intentionally added water in the pouches of document D3 cannot compensate for the fact that this citation is totally silent as to a possible moisture-regulating function of any of the ingredients of the exemplified pouches and, thus, does not disclose the presence therein of any MR system.

5.2 Concerning the technical problem to be solved by the invention as claimed in claim 7, the board sees no need to depart from the formulation under point 3.3 above.

5.3 As a second solution to said technical problem, the patent in suit also proposes the MC L/P pouch according to claim 7 at issue, which is characterised in particular in that the liquid composition comprises an MR system

"comprising by weight of the system: a) from 4 to 40% of a C2-C6 monoalkylene polyol or a mixture thereof; b) from 30 to 80% of a polyalkylene glycol glycol ether, glycol ester or a mixture thereof; and c) from 5 to 30% of water".

5.4 The board is satisfied that the technical problem is also effectively solved by the pouches according to claim 7 for the same reasons as given above at points 3.5.1 to 3.5.3. In particular, it must be stressed that the invention examples LT2, LT4 and LT6 in annex 2 are also in accordance with claim 7 (since they comprise an M-component, a P-component and water in the required amounts).

5.4.1 From the considerations under points 3.6.2 to 3.6.5 above, the board also draws the conclusion that, starting from examples 2 or 3 of D2 as the closest prior art, none of the prior art documents D1 to D3 can possibly render obvious the solution to the technical problem proposed in claim 7.

5.4.2 Finally, the reasons given at point 3.6.6 above for rejecting the further lines of argument, starting from document D1 or D3, respectively, as the closest prior art, also apply when assessing the obviousness of the subject-matter of claim 7.

5.4.3 In the board's judgement, the subject-matter of claim 7 thus also involves an inventive step (Articles 52(1) EPC and 56 EPC 1973).

6. Inventive step - Claims 2 to 6 and 8 and 9

Since these claims define preferred embodiments of the inventive subject-matter of claims 1 and/or 7, their subject-matter must also involve an inventive step (Articles 52(1) EPC and 56 EPC 1973).

7. To summarise, the appellant has not succeeded in proving that the opposition division was wrong to find in the decision under appeal that the subject-matter claimed in the granted patent involved an inventive step.

8. Consequently, the respondent's auxiliary request need not also be considered.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

S. Sánchez Chiquero

B. Czech