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Datasheet for the decision of 15 February 2018

Case Number: T 1572/14 - 3.3.06

Application Number: 02788178.8

Publication Number: 1478726

IPC: C11D17/04, C11D17/00

Language of the proceedings: EN

Title of invention:
USE OF A PACKAGED DETERGENT COMPOSITION COMPRISING A CONTAINER

Patent Proprietor:
Reckitt Benckiser Finish B.V.

Opponents:
The Procter & Gamble Company
Henkel AG & Co. KGaA
UNILEVER N.V. / UNILEVER PLC

Headword:
Dissolution time / RECKITT BENCKISER FINISH

Relevant legal provisions:
EPC Art. 100(b)

Keyword:
Sufficiency of the disclosure (no)

Decisions cited:

Catchword:

Europäisches Patentamt
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Office européen des brevets

Beschwerdekammern

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Chambres de recours

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Case Number: T 1572/14 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 15 February 2018

Appellant I: (Opponent 1)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnatti, Ohio 45202 (US)
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Representative:	Henkel AG & Co. KGaA CLI Patents Z01 40191 Düsseldorf (DE)
Appellant III: (Opponent 3)	UNILEVER N.V. / UNILEVER PLC Weena 455/100 Victoria Embankment 3013 AL Rotterdam/London, Greater London EC4Y 0DY (NL)
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Respondent: (Patent Proprietor)	Reckitt Benckiser Finish B.V. Siriusdreef 14 2132 WT Hoofddorp (NL)

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 22 May 2014 rejecting the opposition filed against European patent No. 1478726 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman B. Czech
Members: P. Ammendola
J. Hoppe

Summary of Facts and Submissions

I. The three appeals by **Appellant I** (Opponent I), **Appellant II** (Opponent II) and **Appellant III** (Opponent III) lie against the decision of the Opposition Division rejecting the oppositions filed against European patent No. 1 478 726.

II. Claim 1 of the patent as granted reads as follows:

"*1. Use of a packaged detergent composition comprising a container that at least partly disintegrates in an aqueous environment, the detergent composition comprising at least one liquid and at least one solid insoluble in the liquid characterized in that the at least one solid has a density lower than the density of the liquid and wherein the at least one liquid has a dispersion/dissolution time as measured by the dispersion/dissolution time test in water at 40°C (as described in the description) of more than 30 s in an automatic dishwashing machine.*"

Herein below,
- the expression **PD composition** refers to the "***p**ackaged **d**etergent **composition***" used according to claim 1;
- the term **T_{disp}** refers to the "*dispersion/dissolution time as measured by the dispersion/dissolution time test in water at 40°C (as described in the description)*",
- the expression **the required T_{disp}** refers accordingly, to the T_{disp} "*of more than 30 s*" to be displayed by the "*at least one liquid*" mandatorily present in the PD composition used according to claim 1; and
-this mandatory ingredient of the PD composition is referred to as **the liquid component.**

III. The Opponents had requested revocation of the patent in its entirety on the grounds of, *inter alia*, Article 100(b) EPC, arguing in particular that the test for measuring the dispersion/dissolution time of the liquid was insufficiently described and could thus not be repeated by a person skilled in the art.

IV. In the decision under appeal (see Reasons 3.2 and 3.3) the Opposition Division rebutted this objection, as well as all other pending objections by the Opponents.

V. In their statements of grounds of appeal, the Appellants I to III reiterated the objection regarding the insufficient disclosure of the method for measuring the T_{disp}. In support of this objection the following new documents (*inter* alia) were also relied upon:

D14 = "Technical Report 1" by Ms Katrien Van Elsen *et al.*, 15 pages;

and

D15 = Experimental Report "Versuchsbericht: Durchführung der Messung zu T_{disp}", 4 pages.

VI. With letter of 20 April 2015 the **Respondent** (Patent Proprietor) replied to the statements of grounds of appeal, defending the patent as granted (**Main Request**), or with an amended description (paragraph [0011] deleted; **1st Auxiliary Request**). It also enclosed three sets of amended claims as **2nd**, **3rd** and **4th Auxiliary Requests**.

Despite the amendments made, the respective claims 1 according to each of the 2nd to 4th Auxiliary Requests all comprise exactly the same definition of the T_{disp} of the liquid component as granted claim 1.

VII. With a further letter Appellant I filed the following new document in support of its insufficiency objection:

D18 = "Technical Report 2 of O1, by Ms Katrien Van Elsen *et al.*, 3 pages.

VIII. The Parties were summoned to oral proceedings, which were held on 15 February 2018 in the previously announced absence of Appellant III. At the hearing, it was expressly conceded by the Respondent that any finding of the Board in respect of the debated sufficiency issues related to the T_{disp} feature would necessarily also apply *mutatis mutandis* to the respective claims 1 of the 2nd to 4th Auxiliary Requests.

IX. Final requests of the Parties

Appellants I and II requested, and Appellant III had requested in writing, that the decision under appeal be set aside and the patent be revoked.

The Respondent requested that the appeal be dismissed (Main Request) or, if that is not possible, that the patent be maintained on the basis of:

- the claims as granted and an amended description in which paragraph [0011] is deleted (1st Auxiliary Request),
- or on the basis of the claims according to one of the 2nd, 3rd and 4th Auxiliary Requests, filed with letter of 20 April 2015,

the Auxiliary Requests to be taken in their numerical order.

X. The Appellants' arguments of relevance here can be summarised as follows:

The claimed invention was insufficiently disclosed because the patent disclosed no liquid composition with the required T_{disp} (i.e. no liquid component as referred to in granted claim 1), and did not contain sufficient guidance on how to formulate a suitable liquid component. The detergent composition exemplified (components listed in "*Table I*" of the patent) was neither described as being (fully) liquid nor reproducible, since some ingredients (i.e. "*polyacrylate*") were not precisely identified. Thus, carrying out the patented invention required to randomly attempt to formulate a liquid composition (among the large number of liquid compositions conceivable in the light of the very generic indications in the patent) and to then verify whether such a "tentative" liquid composition had the required T_{disp}, i.e. qualified as liquid component in accordance with granted claim 1.
However, the skilled person attempting to measure the T_{disp} following the indications under the heading "*Method for measuring dispersion-dissolution time of the liquid phase*" disclosed in paragraphs [0013] to [0018] of the patent in suit, was inevitably confronted with a number of problems that rendered impossible to arrive to a precise measure of both the T_{start} and the T_{final} values required for determining the T_{disp}.

In particular, the problems rendering impossible the determination of the T_{final} were apparent from the photographs comprised in D14 and D15 (corresponding to attempts to carry out the method for measuring the T_{disp} described in the patent), that showed formation of excessive turbidity, or the floating around and even the shredding of the sachet by the propeller-stirrer and/or the change in shape of the sachet during the test. The sachets used according to D14 had been prepared using conventional sachet-forming conditions, that normally resulted in trapping large air bubbles within the sachet. This was proven by D18, comprising photographs of several commercial sachets for automatic dishwashing machines also comprising large air bubbles and, thus, also floating when dropped into water. The description (in the patent) of the method for measuring the T_{disp} was silent on avoiding the trapping of large air bubbles within the sachet. Moreover, the same problem would occur even in the absence of any trapped air bubble in case the liquid component had already *per se* a density below that of water.

The Appellants also stressed that the Respondent's allegation that the person skilled in the art would be able to carry out the method disclosed in paragraphs [0013] to [0018] of the patent was not supported by any, let alone experimental evidence.

Hence, the subject-matter of granted claim 1 could either not be reproduced at all, or only after an undue amount of experimental work. Thus, the patent was to be revoked on the grounds of Article 100(b) EPC.

XI. The Respondent's relevant counter-arguments can be summarised as follows:

The person skilled in the art would have no difficulties in following the indications regarding the method to be used for measuring the T_{disp} described in paragraphs [0013] to [0018] of the patent.

The Respondent initially disputed the relevance of the photographs in D14, showing sachets (with large air bubbles) initially floating in water and then shredded by the propeller-stirrer, arguing that the sachets used in the experiments of D14 had been formed so as to trap therein particularly large air bubbles. However, at the oral proceedings the Respondent no longer disputed that the sachets of D14 resulted from a conventional implementation of the described measuring method. Instead, the Respondent then argued that the person skilled in the art encountering the shredding of the sachets observed according to D14 would be able to overcome such difficulty by avoiding the trapping of any such large air bubbles during the making of the sachet. Thus, the T_{disp} could be determined also in such cases.

Accordingly, the patented subject-matter could be reproduced without difficulties and the grounds of opposition under Article 100(b) EPC did not prejudice the maintenance of the patent as granted.

Reasons for the Decision

Admittance into the appeal proceedings of D14, D15 and D18

1. Documents D14, D15 and D18 were only filed in the appeal proceedings.

Considering

- that no objection was raised by a party as regards the late filing of one of these documents, and

- that the evidence submitted is supposed to further corroborate the respective positions of the parties as regards the controversial issue of sufficiency,

the Board, in the exercise of its discretion under Article 114(2), EPC and in accordance with Article 12(2) RPBA saw no reason for not admitting and considering these documents in the appeal proceedings.

Main request and 1st Auxiliary Request - claims as granted

2. Insufficient disclosure

2.1 Claim 1 as granted (full wording under II, *supra*) is directed to the use of a PD composition comprising a liquid component that must display the required T_{disp}.

2.2 The passages in the description of the patent setting out the method for measuring the T_{disp} are entitled (page 2, line 56) "*Method for measuring dispersion-dissolution time of the liquid phase*"

and read as follows:

[0014] A 5 1[sic] *beaker (diameter: 18 cm) is filled with 4.5, 1 tap water (15-20°dH). The temperature is maintained at 40 °C. A propeller-stirrer with a diameter of 78 mm is immersed into the beaker (immersion depth 53.5 mm).*

[0015] A sachet made by thermoforming PT75, filled it with 18 ml of the liquid composition to be tested and sealed with PT75 is dropped into the pre-heated water, which is stirred at 150 rpm.

[0016] The sachet starts dissolving and the time (in seconds) elapsed until the release of the liquid phase into water starts (T_{start}*) is determined either visually*

if the liquid phase is colored or generates turbidity when being dissolved in water, or alternatively by detecting the increase in conductivity of water.

[0017] The sachet is then visually observed and the time when its height is reduced by 80 % is annotated as the final time (in seconds).

[0018] The dispersion/dissolution time of the liquid composition is then calculated as:

$T_{disp} = T_{final} - T_{start}$".

2.3 In the present case, being able to perform the measurement of T_{disp} of the liquid is an essential pre-condition for being able to carry out the claimed use. In this respect, the Board notes the following:

2.3.1 Firstly, the patent in suit does <u>not</u> disclose that the required T_{disp} is the inevitable consequence of some other (measurable) property.

Indeed, the only factor having a bearing on the T_{disp} of the liquid component identified in the patent in suit appears to be its viscosity, apparently in the sense that the higher the viscosity, the longer the T_{disp} (see [0006] to [0009] and[0021]).

However, the required T_{disp} of the liquid component is <u>not</u> disclosed as corresponding to a specific (minimum) viscosity of that component, and the disclosure in the patent in suit as to the relation between the T_{disp} and the liquid component's viscosity does <u>not</u> suggest that, generally speaking, liquid components of different chemical composition but of the same viscosity must also have about the same T_{disp}.

Hence, even assuming (*arguendo*) that the person skilled in the art would be able to prepare a certain liquid component, for which it was possible to measure (with certainty) a T_{disp} above 30 s, this does not mean (and the patent contains no such indication) that any other liquid component having a viscosity similar to that of this certain liquid component would also necessarily have the required T_{disp}.

2.3.2 Secondly, the patent in suit does not disclose in sufficient detail how to "compose" (in terms of ingredients and relative amounts) a chemical composition qualifying as liquid component according to claim 1, i.e. displaying the required T_{disp}.

Indeed, the patent in suits only suggests to the skilled reader several (specifically or generically identified) chemical compounds as suitable ingredients of the PD composition(s) as a whole (see [0057] to [0089]), without indicating however which (if any) of these ingredients are to be considered as mandatory or preferred components of the liquid component.

The (complete) chemical composition of liquid components certainly possessing the required T_{disp} is also not disclosed by the rather vague indications in paragraph [0032] reading: "... *The liquid composition, may be thickened or gelled if desired. The liquid composition may be non-aqueous or aqueous, for example comprising less than or more than 5% total or free water. The composition may have more than one phase. For example it may comprise an aqueous composition and a liquid composition which is immiscible with the aqueous composition ...*".
Even the composition of "*Table I*" - which apparently describes a "*detergent composition, usual and suitable*

for use in automatic dishwashing machine" actually used in the patent Example (see [0090]), but for which no T_{disp} value is given, can at most be presumed (because it also comprises a substantial amount of water) to actually be a liquid composition possibly having the required T_{disp}. In any case, it is not fully disclosed (at least because the "*Polyacrylate*" and "*Enzymes*" ingredients used are not further specified). Hence, even assuming (*arguendo*) in favour of the Respondent that any enzyme and polyacrylate conventionally used in liquid detergent compositions for automatic dishwashing machines, when combined with the other ingredients specified in Table I, would result in a liquid composition, carrying out the claimed used would still require ascertaining, beforehand, whether or not such liquid composition actually displays the required T_{disp}.

2.3.3 Thus, the skilled person can only carry out the claimed use after having identified liquid compositions (among those that can be obtained by e.g. randomly attempting to formulate a detergent composition according to Table I or by randomly combining other, liquid or easily soluble compounds encompassed among the ingredients of the PD composition disclosed in paragraphs [0057] to [0089] of the patent in suit) for which the skilled person is able to measure a T_{disp} above 30 s.

2.4 In the Appellants' view the description in the patent in suit (in paragraphs [0013] to [0018]), of the method for measuring the T_{disp} was insufficient in respect of how to reliably determine the value T_{start} and the value of T_{final}, necessary for calculating T_{disp} according to the formula given in paragraph [0018] of the patent (quoted under 2.2, *supra*). However, it turned out that the objections raised by the Appellants regarding the measurement of the T_{final} justify as such (for the reasons given under 2.5.1 to 2.5.4, *infra*) the conclusion that the method for determining the T_{disp} is insufficiently disclosed.

Hence, in the following reasoning it is assumed, for the sake of argument only but in favour of the Respondent, that the skilled person is able, on the basis of the description in paragraph [0016] of the patent in suit, to identify the T_{start} value.

2.5 The experimental evidence on file - D14, D15, D18

2.5.1 The Board notes that although the Appellants submitted experimental evidence (D14 and D15) to demonstrate the impossibility of measuring reliably the T_{disp} using the method described in the patent, the Respondent did
- neither provide experimental counter-evidence (showing e.g. that the person skilled in the art following the instructions in the patent would succeed in measuring the T_{disp} of a liquid composition he/she considers suitable as liquid component)
- nor identify chemical compositions of liquid components for which all the difficulties in measuring of the T_{disp} reported in D14 and D15 might be predicted not to occur.

2.5.2 Considering the experiments reported in D14 and D15, the Board comes to the conclusion that a reliable determination of the T_{final} will be substantially impossible in, *inter alia*, the four cases A) to D) addressed below, bearing in mind that T_{final} corresponds to a "*visually observed*" reduction by 80% of the undefined dimension described as "*height*" of the sachet, see [0017] and [0018] quoted under 2.2, *supra*).

A) Substantial turbidity is developed within less than 30 s after the T_{start}, thereby rendering impossible to determine if the 80% reduction of the sachet's "*height*" has already occurred before or after 30 s.

This appears to be a plausible possibility already in view of the fact that the T_{start} is defined in [0016] of the patent in suit as being associated with the observation of turbidity.

The occurrence of such substantial turbidity in less than 30 s is illustrated by the photographs comprised in D14, in particular on pages 14 and 15:
- some initial turbidity observed at time = 0 s,
- substantial turbidity observed at time = 20 s and
- more substantial turbidity observed at time = 25 s).

B) The liquid composition under consideration has a density about or lower than that of water.

In this case the impossibility of measuring the T_{final} is self-evident, since the sachet containing such low-density liquid will inevitably tend to float. Thus, it will be moved around by the stirred water and thereby may either undergo sudden destruction by impacting on the propeller-stirrer (as in case "D", *infra*) or it will at least continuously change its spatial orientation. As a consequence, a quantitative determination, by visual observation, of the percent reduction of the initial "*height*" of the sachet becomes impossible, whatever dimension might be considered as said "*height*".

C) A substantial change in the overall shape of the sachet occurs within 30 s after the T_{start}.

As apparent from the photographs in D15 the dissolution/dispersion may cause a shape change of the dissolving sachet to such an extent that it becomes impossible to identify, in the new shape, which part of this latter corresponds to the initial "*height*" of the sachet (whatever dimension might be considered as initial "*height*").

D) The liquid component under consideration, despite being substantially more dense than water, is present in a sachet that comprises a large air bubble and, thus, floats when dropped into the water.

This case is illustrated by the photographs on pages 5 to 9 of D14, showing the sachet being initially moved around by the stirred water and then undergoing sudden destruction by impacting on the propeller-stirrer.

2.5.3 The Respondent ultimately no longer disputed that large air bubbles might be formed when forming a sachet according to the limited instruction provided in paragraphs [0013] to [0018] of the patent in suit and that, thus, the sachets used in the experiments of D14 are formed in accordance with usual methods for forming sachets comprising a dishwashing composition.

Indeed, the photographs in D18 of commercial products with large air bubbles, floating when dropped in water, confirm that the sachets used in the experiments reported in D14 (see photographs on pages 2, 13 and 14) contain air bubbles of dimensions comparable to those present in many commercial dishwashing sachets.

2.5.4 The Proprietor then disputed the relevance of the data in D14 by submitting that a skilled person would immediately realize that any difficulties in carrying out the described measuring method possibly arising from the presence of a large air bubble trapped in the sachet, could easily be overcome, in particular by avoiding the trapping of such large bubbles during the formation of the sachet.

The Board notes that, even accepting (*arguendo*) in favour of the Respondent that this argument is correct, this would at most imply that the skilled person is able to overcome the difficulties addressed under "D)", *supra*).

However, already considering the other difficulties enumerated under "A)" to "C)" *supra,* that the person skilled in the art will encounter when attempting to formulate, following the very generic and limited guidance, in the patent in suit as to possible ingredients, a liquid component necessary for carrying out the claimed use, the Board holds will not be able to determine the T_{final} of a substantial number of liquid compositions that he/she might take into consideration as conceivable liquid component. Hence, if only for this reason, a substantial number of random attempts (trial and error) may be necessary in order to identify liquid compositions that can actually be ascertained to display the the required T_{disp}.

2.6 Based on the above consideration the claimed use is not disclosed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art across the full ambit of granted claim 1 without an undue burden of experimental work to be carried out beforehand, needed to identify liquids displaying the required T_{disp} when tested according to the method indicated in the patent.

2.7 Hence, claim 1 as granted is objectionable under Article 100(b)/83 EPC.

3. Therefore, neither the Main Request nor the 1st Auxiliary Request is allowable.

2nd, 3rd and 4th Auxiliary Requests

4. Insufficiency of the disclosure

4.1 In the respective claims 1 of the 2nd, 3rd and 4th Auxiliary Requests the liquid component is defined in the same manner as in claim 1 as granted. The amendments made to claim 1 as granted according to these requests have no bearing on the definition of the liquid component.

4.2 As expressly conceded by the Respondent at the oral proceedings before the Board, the finding of the Board regarding insufficiency of the disclosure (*supra*) thus also applies *mutatis mutandis* to the independent claims 1 of the 2nd to 4th Auxiliary Requests (Article 83 EPC). These are likewise objectionable under Article 83 EPC.

5. Hence, none of the 2nd to 4th Auxiliary Request is allowable either.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The patent is revoked.

The Registrar: The Chairman:

D. Magliano B. Czech

Decision electronically authenticated