

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 17 January 2019**

Case Number: T 0444/16 - 3.3.06

Application Number: 09178677.2

Publication Number: 2333039

IPC: C11D1/66, C11D1/72, C11D1/825

Language of the proceedings: EN

Title of invention:
Method and use of a dishwasher composition

Patent Proprietor:
The Procter & Gamble Company

Opponent:
Henkel AG & Co. KGaA

Headword:
Method of achieving drying through the wash / PROCTER & GAMBLE

Relevant legal provisions:
EPC Art. 56

Keyword:

Inventive step (main request - first to third auxiliary request) : no - all features of claim 1 disclosed in the closest prior art (fourth auxiliary request) : yes - unexpected advantage

Decisions cited:

T 1252/15, G 0002/88

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0444/16 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 17 January 2019

Appellant: Henkel AG & Co. KGaA
(Opponent) Henkelstrasse 67
40589 Düsseldorf (DE)

Representative: Henkel AG & Co. KGaA
CLI Patents
Z01
40191 Düsseldorf (DE)

Respondent: The Procter & Gamble Company
(Patent Proprietor) IP Department
One Procter & Gamble Plaza
Cincinnati, OH 45202 (US)

Representative: Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES (GB)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 21 December
2015 rejecting the opposition filed against
European patent No. 2333039 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: L. Li Voti
R. Cramer

Summary of Facts and Submissions

- I. The present appeal is from the decision of the Opposition Division to reject the opposition against the European patent no. 2 333 039.
- II. With its statement of grounds the opponent (the "appellant") contested the novelty of the claimed subject-matter in view of example 8 of D1 (WO 2006/097435 A1), and its inventive step starting from D1 as representing the closest prior art.
- III. With its reply the patent proprietor (the "respondent") filed four sets of amended claims as first to fourth auxiliary requests.
- IV. In its preliminary opinion the board held in particular claim 1 to be novel over D1, in particular its example 8.
- V. In its reply to the Board's communication the appellant contested the admissibility of the second and third auxiliary requests, the novelty of claim 1 of the first, second and third auxiliary requests in the light of the cited example of D1 and the inventive step of claim 1 of the fourth auxiliary request.
- VI. With a letter dated 16 January 2019 the respondent inter alia filed a further set of claims as fifth auxiliary request.
- VII. During the oral proceedings held on 17 January 2019 inventive step was discussed starting from document D1 as closest prior art, taking into consideration the reference to D6 (Hauthal, Wagner: "Reinigungs- und

Pflegemittel im Haushalt", Verlag für chemische Industrie, Seiten 161-184 (2003)) in this document.

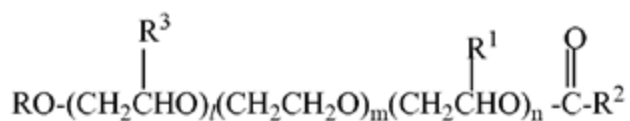
VIII. The final requests of the parties were the following:

The Appellant requested that the decision under appeal be set aside and that the patent be 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 first to fourth auxiliary requests filed with letter of 26 August 2016 or on the basis of the fifth auxiliary request filed with letter of 16 January 2019.

IX. Independent claims 1 and 10 according to the main request (patent as granted) read as follows:

"1. A method of achieving drying through the wash in a dishwasher comprising the step of delivering into the main wash of the dishwasher an automatic dishwashing detergent composition comprising an esterified alkyl alkoxyated surfactant of general formula (I)



where

R is a branched or unbranched alkyl radical having 8 to 16 carbon atoms;

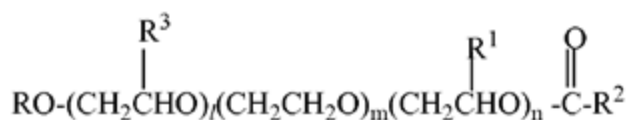
R³, R¹ independently of one another, are hydrogen or a branched or unbranched alkyl radical having 1 to 5 carbon atoms;

R² is an unbranched alkyl radical having 5 to 17 carbon atoms;

l, n independently of one another, are a number from 1 to 5 and

*m is a number from 13 to 35; and
an alcohol alkoxyated surfactant, preferably an
alcohol ethoxyated."*

"10. Use of an automatic dishwashing detergent
composition comprising an esterified alkyl alkoxyated
surfactant of general formula (I)



where

*R is a branched or unbranched alkyl radical having 8 to
16 carbon atoms;*

*R³, R¹ independently of one another, are hydrogen or a
branched or unbranched alkyl radical having 1 to 5
carbon atoms;*

*R² is an unbranched alkyl radical having 5 to 17 carbon
atoms;*

*l, n independently of one another, are a number from 1
to 5 and m is a number from 13 to 35; and
an alcohol alkoxyated surfactant, preferably an
alcohol ethoxyated in the main-wash of a dishwasher to
provide drying through the wash in an automatic
dishwashing operation."*

Claim 1 according to the **first auxiliary request**
differs from claim 1 as granted by the following
amendment:

"1. ... ~~an alcohol alkoxyated surfactant, preferably
alcohol ethoxyated~~ **and wherein the esterified alkyl
alkoxyated and the alcohol alkoxyated are present in
a weight ratio of from about 1:1 to about 10:1.**"

Claim 1 according to the **second auxiliary request**
corresponds to claim 10 as granted.

Claim 1 according to the **third auxiliary request** differs from claim 10 as granted by the following amendment:

*"... an alcohol alkoxyated surfactant, preferably alcohol ethoxylated **and wherein the esterified alkyl alkoxyated and the alcohol alkoxyated are present in a weight ratio of from about 1:1 to about 10:1 in the main wash of a dishwasher ...**".*

Independent claims 1 and 9 according to the **fourth auxiliary request** correspond to claims 1 and 10 as granted with the following amendment:

*"1. ... an alcohol alkoxyated surfactant, preferably an alcohol ethoxylated **wherein the alcohol ethoxylated has an aliphatic alcohol chain containing from about 10 to 14 carbon atoms and from 5 to 8 molecules of ethylene oxide**".*

Dependent claims 2 to 8 according to the fourth auxiliary request concern particular embodiments of the method of claim 1.

Reasons for the Decision

1. Main request (patent as granted) - Inventive step
- 1.1 Preliminary remark

As already expressed in the Board's preliminary opinion, claim 1 being a method claim, it can only be characterised by process features, with the consequence that the feature "achieving drying through the wash" may be held as defining a certain quality of the

process but that this feature does not imply any specific limitation to the claimed process.

1.2 The alleged invention

1.2.1 According to the patent (paragraphs [0002], [0003] and [0005]), an automatic dishwashing operation includes typically a pre-wash cycle, a main-wash cycle, a rinse cycle and a drying cycle, but at the end of the operation the items, in particular those made of plastic, are usually wet, so that rinse aids are usually added in the rinse cycle to help drying.

The purpose of the invention (paragraph [0004]) is thus to provide a method and use of an automatic dishwashing product that provides good drying without the need of adding a separate product in the rinse cycle, which at the same time provides good cleaning and finishing of the washed items.

1.2.2 D1, that the parties agreed to represent the closest prior art, discloses surfactant mixtures suitable for washing/cleaning compositions and showing improved washing/cleaning efficiency (page 1, lines 5-6 and page 2, lines 10-12). In particular, D1 discloses (page 2, lines 14-26 in combination with page 3, line 34 to page 4, line 4) mixtures of a non-ionic esterified alkyl alkoxyated surfactant of formula (I), corresponding to the esterified non-ionic surfactant according to claim 1 at issue, with the corresponding non esterified alcohol alkoxyated surfactant.

A particularly preferred application of such surfactant mixtures are (page 6, lines 14-17) the so-called "2 in 1" or "3 in 1" tabs disclosed in document D6. It is undisputed that the tabs of D6 (see D6, point 4.2.4)

are dishwashing products to be added in the main wash of an automatic dishwashing operation and which comprise both a cleaning formulation and a rinse aid.

For the board, it follows from the above considerations that D1 thus discloses implicitly a method for automatic dishwashing including the step of delivering into the main wash a detergent composition comprising both the essential surfactants of claim 1 at issue.

1.2.3 As explained above the wording "achieving drying through the wash" is not a limiting feature of claim 1. Furthermore the wording of claim 1 at issue does not exclude the addition of a rinse aid in the main wash as it would occur when using the "2 in 1" or "3 in 1" tabs disclosed in D6, itself referred to in D1.

1.2.4 In the Board's view it follows from the above considerations that D1 discloses already a method having all the features of claim 1 at issue. It is established jurisprudence that in such a case the claimed subject-matter inevitably lacks inventive step (T 1252/15 of 1 March 2018, point 3 of the reasons).

1.3 Therefore, the Board concludes that the subject-matter of claim 1 at issue does not comply with the requirements of Article 56 EPC. The main request is therefore not allowable.

2. First auxiliary request - inventive step

2.1 Claim 1 according to this request differs from claim 1 of the main request only in that the alcohol alkoxyated surfactant is an "*alcohol ethoxyated and the weight ratio of the esterified alkyl alkoxyated*

surfactant of formula (I) to the alcohol alkoxyated is from about 1:1 to about 10:1."

- 2.2 The board notes that D1 (page 4, lines 4-5) discloses that the molar ratio of the esterified alkyl alkoxyated non-ionic surfactants of formula (I) to the corresponding non esterified alcohol alkoxyated is preferably of at least 1:1. Since the ester has necessarily a greater molecular weight than the corresponding alcohol, this means that the weight ratio is more than 1:1.

As the alkoxyate according to formula (I) is an ethoxyate with m being from 13 to 35, as in claim 1 at issue, it follows from the above that the additional features in claim 1 at issue do not further distinguish the claimed subject-matter from the disclosure of D1.

- 2.3 Hence, the subject-matter of claim 1 of this request lacks inventive step (Article 56 EPC) for the same reasons as claim 1 of the main request. The first auxiliary request is therefore not allowable either.

3. Second and third auxiliary request - inventive step

- 3.1 Claim 1 according to these requests concerns the use of the automatic dishwashing detergent composition according to claim 1 of the main and first auxiliary requests, respectively, in the main wash of a dishwasher to provide drying through the wash in an automatic dishwashing operation.

- 3.2 According to the Respondent such a claim is allegedly drafted as a second non-medical use and the feature "to provide drying through the wash in an automatic dishwashing operation" would represent a technical

feature of the claim according to G 2/88 (OJ EPO 1990, 93).

- 3.3 The board notes that claim 1 at issue includes the feature "automatic dishwashing detergent composition comprising ...", which does not exclude the presence of other components in the composition, such as rinse aids, which nevertheless are commonly known and acknowledged as such in the patent (see e.g. page 2, line 21) to accelerate the drying of washed items.
- 3.4 Since - as explained above - D1 also discloses a method of dishwashing using "2 in 1" or "3 in 1" tabs comprising the surfactant mixture of claim 1 at issue and a rinse aid, it implicitly also discloses the use of such a dishwashing detergent composition in the main wash of a dishwasher to provide drying through the wash in an automatic dishwashing operation, i.e. a use having all the features of claim 1.
- 3.5 Claim 1 according to the second and third auxiliary requests thus lacks inventive step for the same reasons as exposed above.
- 3.6 Since these requests fail on this ground it is neither necessary to decide whether the wording of claim 1 complies with the criteria of G 2/88 for a claim directed to a second non-medical use, nor to discuss the admissibility of these requests.
4. Fourth auxiliary request - inventive step
- 4.1 Claim 1 of this request differs from claim 1 as granted in that the alcohol alkoxyated is an alcohol ethoxyated having an aliphatic alcohol chain

containing from about 10 to 14 carbon atoms and from 5 to 8 molecules of ethylene oxide.

4.2 Starting from D1 as representing the closest prior art, the respondent defined the technical problem underlying the invention as the provision of an automatic dishwashing method that provides improved drying, especially on plastic items, without the need of adding a rinse aid, and which at the same time provides good cleaning and finishing of the washed items.

4.3 The example of the patent (paragraphs [0102] and [0103]) shows (formulations B and D) that a method of automatic dishwashing involving the addition in the main wash of a detergent composition comprising the combination of esterified alkyl alkoxyated non-ionic surfactant of formula (I) (LF731) with an alcohol ethoxylated surfactant having an ethoxylated aliphatic alcohol chain as claimed (Lutensol T07, being a C₁₃ oxo alcohol ethoxylate having 7 ethylene oxide units; see page 5, line 28 of the patent) provides better drying and almost complete drying (and also good cleaning and finishing) of a plastic load compared to a composition comprising the esterified alkyl alkoxyated surfactant of formula (I) alone (formulation A) and, additionally, achieves this effect without the use of a commonly known rinse aid.

This demonstrates that a method as claimed provides an improvement over a method as disclosed in D1 wherein the esterified alkyl alkoxyated of formula (I) is not used in combination with an alcohol ethoxylated having an aliphatic alcohol chain containing from about 10 to 14 carbon atoms and from 5 to 8 molecules of ethylene oxide and wherein a rinse aid is present.

- 4.4 The Appellant, though contesting the results shown in this example, did not provide any evidence that the effect discussed above would not be achieved throughout the scope of claim 1 at issue.
- 4.5 For the Board, the example of the patent in suit thus convincingly shows that the claimed method solves the technical problem posed.
- 4.6 The only question to be answered for evaluating inventive step of the claimed subject-matter is thus whether the skilled person, starting from a method as disclosed in D1, i.e. a method including the addition in the main wash of a "2 in 1" or "3 in 1" tab comprising the esterified non-ionic surfactant of formula (I) and a rinse aid, would have envisaged to add an alcohol ethoxylated having an aliphatic alcohol chain containing from about 10 to 14 carbon atoms and from 5 to 8 molecules of ethylene oxide to the dishwashing composition of D1 with the expectation of arriving at a method able to provide improved drying of the washed articles, especially those made of plastic, without the need of a rinse aid.
- 4.7 The board notes that D1 indeed suggests, as one of many possible variations, the addition of known non-ionic surfactants such as C₈₋₂₂ fatty alcohol alkoxyates or oxoalcohol alkoxyates (page 8, lines 21-22), however it does not disclose the alcohol alkoxyate of claim 1 nor does it specify for which type of operation the additional surfactants would be useful.

For the sake of completeness, the board notes that the alcohol ethoxylates of claim 1 do not fall under the structural formula (III) of D1 either. This in fact requires at least 13 to 35 ethylene oxide groups

(m = 13-35) instead of the 5 to 8 defined in claim 1 at issue.

- 4.8 Moreover, it was neither known from D1 nor from common general knowledge that the selected non-ionic alcohol ethoxylates and even the esterified non-ionic surfactants of formula (I) of claim 1 could during dishwashing have an effect on the drying of the washed items, especially those made of plastic.
- 4.9 Therefore, in the light of the disclosure of D1 it would not have been obvious for the skilled person to try the combination of the disclosed esterified alkyl alkoxyate surfactants with the non-ionic alcohol ethoxylate surfactants of claim 1 at issue with the expectation of improving the drying of items, especially those made of plastic, washed with the automatic dishwashing composition of D1, let alone without the need of using a rinse aid.
- 4.10 It follows from the above considerations that the subject-matter of claim 1 involves an inventive step (Article 56 EPC).
- 4.11 The same conclusion applies to dependent method claims 2 to 8 and to claim 9, directed to the use of the automatic dishwashing composition of the method of claim 1 in the main-wash of a dishwasher.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form on the basis of the claims according to the fourth auxiliary request filed with letter of 26 August 2016 and a description to be adapted.

The Registrar:

The Chairman:



D. Magliano

J.-M. Schwaller

Decision electronically authenticated