

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 1970/15 - 3.3.06

Application Number: 09178697.0

Publication Number: 2333040

IPC: C11D1/66, C11D3/37, C11D3/33

Language of the proceedings: EN

Title of invention:
Detergent composition

Patent Proprietor:
The Procter & Gamble Company

Opponents:
BASF SE
Henkel AG & Co. KGaA

Headword:
Detergent composition for drying through the wash / PROCTER &
GAMBLE

Relevant legal provisions:
EPC Art. 54, 56, 84, 123(2)

Keyword:

Clarity (not objectable) : contested term already contained in the granted claims

Added matter : no

Novelty : yes

Inventive step : yes - unexpected effect of the claimed combination

Decisions cited:

G 0003/14

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 1970/15 - 3.3.06

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

Appellant 1: BASF SE
(Opponent 1) Carl-Bosch-Str. 38
67056 Ludwigshafen am Rhein (DE)

Representative: BASF IP Association
BASF SE
G-FLP-C006
67056 Ludwigshafen (DE)

Appellant 2: Henkel AG & Co. KGaA
(Opponent 2) 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: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
13 July 2015 maintaining European Patent
No. 2333040 in amended form.

Composition of the Board:

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

Summary of Facts and Submissions

- I. The present appeals are from the interlocutory decision of the Opposition Division to maintain the European patent no. 2 333 040 in amended form according to the third auxiliary request filed during oral proceedings on 03 June 2015.
- II. With their statement of grounds of appeal the Appellants (Opponents 1 and 2) raised objections under Articles 84 and 123(2) EPC and contested the novelty of the claimed subject-matter over D1 (WO 2006/097435) and the inventive step thereof starting from D1 or D9a (machine translation of JP 2000-178586 (D9)) as closest prior art.
- III. With its reply the Respondent filed four sets of amended claims as auxiliary requests 1 to 4 and proposed document WO 2009/033972 (in the following D14) as representing the closest prior art.
- IV. In its preliminary opinion the Board held that clarity could not be objected to against claim 1 at issue and that said claim met the requirements of Articles 54 and 123(2) EPC. Moreover, it noted that D1 appeared to be more relevant than D9a and so represented the closest prior art.
- V. In response to the Board's communication, Appellant/Opponent 1 filed a new document

D15: Waldenbuch, K.H.: "*Geschirrspülmittel - Marktsituation und aktueller Entwicklungsstand von Hand- und Maschinengeschirrspülmitteln*"; Jahrbuch für den Praktiker 2003, Verlag für chemische Industrie, pages 239-256;

and the Respondent submitted a copy of D14 and written versions of auxiliary requests 5 to 7.

- VI. With further letters, the Respondent filed an experimental report and Appellant/Opponent 1 requested not to admit said report or, subsidiarily, an award of its costs or that the oral proceedings be postponed if the Respondent's experimental report was admitted.
- VII. During the oral proceedings held on 17 January 2019 inventive step was discussed starting from document D1 as the closest prior art, and taking into consideration D13 (Hauthal, Wagner: "*Reinigungs- und Pflegemittel im Haushalt*", Verlag für chemische Industrie, pages 161-184 (2003)) referred to in D1.

The Appellants maintained their objections under Articles 84, 123(2) and 54 EPC, but did not add anything to their written submissions.

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

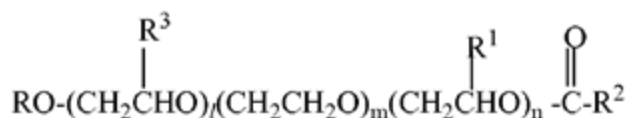
The Appellants requested that the decision under appeal be set aside and the patent be revoked. Additionally Appellant 1 requested postponement of the oral proceedings and an award of its costs to the oral proceedings if the Respondent's experimental report filed with letter of 20 December 2018 be admitted into the proceedings.

The Respondent requested that the appeals be dismissed, or alternatively that the decision under appeal be set aside and the patent be maintained in amended form on the basis of one of the first to fourth auxiliary requests filed with letter of 8 April 2016, or of one

of the fifth to seventh auxiliary requests filed with letter of 18 December 2018.

IX. Independent claims according to the main request (patent in the form as maintained by the opposition division) read as follows:

"1. An automatic dishwashing detergent composition for use in the main wash of a dishwasher to provide drying wherein the detergent comprises an esterified alkyl alkoxyated surfactant of general formula (1)



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

a dispersant organic polymer wherein the organic polymer is a carboxylated/sulfonated polymer, and wherein the detergent composition is in the form of a unit dose."

"9. A method of dishwashing in a dishwasher comprising the step of delivering a detergent according to any preceding claim into the main wash of the dishwasher."

"10. A method of achieving drying through the wash in a dishwasher comprising the step of delivering a detergent comprising according to any of claims 1 to 8 into the main wash of the dishwasher."

"11. Use of a detergent product comprising detergent according to any of claims 1 to 8 in the main-wash of a dishwasher to provide drying through the wash in an automatic dishwashing operation."

Dependent claims 2 to 8 concern particular embodiments of the detergent composition according to claim 1.

Reasons for the Decision

Main request (claims as maintained by the opposition division)

1. As regards the objections under Articles 84, 123(2) and 54 EPC raised in writing by the Appellants no additional arguments were brought after the Board's communication. Therefore, the Board has no reason to diverge from its preliminary opinion which was as follows.
2. Clarity (Article 84 EPC)/Interpretation of claim 1
 - 2.1 The feature "carboxylated/sulfonated polymer", the clarity of which was contested, being already present in granted claim 2, its clarity cannot be objected during opposition appeal proceedings (G 3/14, OJ 2015, 102, reasons, point 81).
 - 2.2 As regards the interpretation of this allegedly unclear feature, the Board notes that the same wording is used in particular in document D7 (Technical brochure Acusol 588 G by Rohm and Haas) to define the polymer used in the example of the patent, said polymer comprising both carboxylate and sulfonate monomers. Moreover, it is clear from the description of the patent in suit (paragraphs [0050] to [0055]) that the carboxylated/

sulfonated polymer of claim 1 has to comprise at least one carboxylate monomer and at least one sulfonate monomer.

3. Alleged added subject-matter (Article 123(2) EPC)

As regards this objection the Board agrees with the Respondent that the amended claims find support in the combination of claims 1, 2 and 9 of the application as originally filed. Claim 1 thus complies with the requirements of Article 123(2) EPC.

4. Novelty (Article 54 EPC)

Since D1 does not disclose a polymeric dispersant having both carboxylate and sulfonate monomers, it cannot detract from the novelty of the claimed subject-matter. The subject-matter of claim 1 is thus novel over D1.

5. Inventive step (Article 56 EPC)

5.1 The present invention concerns (paragraph [0001] of the patent and claim 1) an automatic dishwashing detergent composition, in the form of a unit dose, to be used in the main wash of a dishwashing operation.

5.1.1 As explained in the description of the patent (paragraphs [0002], [0003] and [0005]), at the end of an automatic dishwashing operation, which includes typically a pre-wash cycle, a main-wash cycle, a rinse cycle and a drying cycle, items are usually wet, in particular those made of plastic. Rinse aids are thus usually added to the rinse cycle to help drying.

- 5.1.2 The purpose of the invention is to provide a product providing good drying without the need of adding a separate product in the rinse cycle, and which at the same time provides good cleaning and finishing of the washed items (paragraph [0004]).
- 5.2 According to the problem-solution approach the starting point to be used for the evaluation of inventive step is normally a piece of prior art disclosing subject-matter conceived for the same purpose or aiming at the same objective as the claimed invention and having, possibly, the most relevant technical features in common.
- 5.2.1 In this respect, document D1 concerns generically a low foaming non-ionic surfactant suitable for washing/cleaning compositions and showing improved washing/cleaning efficiency (D1: page 1, lines 5-6 and page 2, lines 10-12). A particularly preferred application of such surfactants is their use in the so-called "2 in 1" or "3 in 1" tabs described in document D13. In this respect, it is undisputed that these tabs (see D13, point 4.2.4) are intended to be used in the main wash of an automatic dishwashing operation and that they comprise both a cleaning formulation and a rinse aid. Therefore, such a dishwashing product comprising already a rinse aid, implicitly provides cleaning and finishing of the washed items and contributes necessarily to the final drying without the need of adding a **separate** product in the rinse cycle.

It follows that one of the aims of D1 is the same as the problem underlying the invention of the patent in suit.

5.2.2 It is also not disputed that the non-ionic surfactants used in D1 (page 2, lines 14-26) are the same esterified alkyl alkoxyated surfactants according to formula (1) of claim 1 at issue, and that the "2 in 1" or "3 in 1" tabs disclosed are products in the form of a unit dose.

Therefore, D1 is a document aiming at the same objective of the invention and having most of the relevant technical features in common with the subject-matter of claim 1 at issue. Hence, as already communicated in the Board's preliminary opinion, D1 is a suitable starting point for the evaluation of inventive step.

5.2.3 As also communicated in the preliminary opinion and not contested by the Appellants, D1 is a more suitable starting point than D9a, which thus does not need to be discussed hereinafter.

5.2.4 D14, that only the Respondent held to represent the closest prior art, is cited as background art in the patent (paragraph [0002]). However, even though this document (page 2, first paragraph) has a similar purpose as the patent in suit and thus might also be considered to represent a suitable starting point for evaluation of inventive step, it was neither discussed in the decision under appeal nor by the Appellants, and it was filed by the Respondent only at a very late stage in the proceedings.

Moreover, the Board does not hold D14 more relevant than D1 since the composition disclosed e.g. at page 2, third paragraph, does not contain the esterified alkyl alkoxyated surfactant of claim 1 at issue. Since, as explained below, the claimed subject-matter

has been found inventive over D1, D14 does not need to be further discussed.

5.3 Starting from D1 as closest prior art, the Respondent formulated the technical problem as the provision of an automatic dishwashing product to be added in the main wash of a dishwasher and that provides improved drying, especially on plastic items, in a simplified way, i.e. without the need of adding a rinse aid, and which at the same time provides good cleaning and finishing of the washed items.

5.3.1 The example illustrating the invention (see patent, paragraphs [0099] and [0100], formulation C) shows that a detergent composition comprising the combination of esterified alkyl alkoxyated non-ionic surfactant of formula (1) (LF731) with a carboxylate/sulfonate polymer (Acusol 588G), added to the main wash of a dishwashing operation, provides almost **complete** drying of a variety of plastic items and also good cleaning and finishing without adding a rinse aid together with the detergent composition in a tab as in D1, or separately in the rinse cycle as known in the art.

Similar compositions comprising combinations of said carboxylate/sulfonate polymer with different non-ionic surfactants of a type commonly used in automatic dishwashing operations (formulations A and B) provide clearly worse drying results.

The results of these tests were not contested by the Appellants.

5.3.2 Even though, as objected by the Appellants, the example of the patent does not show the technical contribution of the only technical difference existing between the

subject-matter of claim 1 at issue and that disclosed in D1, i.e. the presence of a carboxylate/sulfonate polymer, the Board is of the opinion that the experimental evidence in the patent shows the superior efficiency on drying of the claimed combination.

It is undisputed that it was neither common general knowledge nor known from D1 that esterified alkyl alkoxyated surfactants of formula (1), when used in prior art automatic dishwashing compositions, were able to provide, alone or in combination with other components, a particular effect on the final drying, in particular of plastic items, apart from their expectable surfactant and cleaning capacity, which however had also to be expected by using other surfactants such as the other non-ionic surfactants tested in the patent.

Hence the clearly better drying shown on plastic items in comparison with similar combinations comprising other conventional non-ionic surfactants is for the Board the evidence of an effect unknown in the prior art and due to the selected combination of components. The absence of evidence for the technical contribution of the only technical difference existing between the subject-matter of claim 1 at issue and that disclosed in D1 is thus under the circumstances of this case irrelevant.

- 5.3.3 Therefore, the Board is convinced that the subject-matter of claim 1 at issue has solved the technical problem posed and it cannot agree with the Appellants that the technical problem underlying the invention has to be reformulated in more simple terms as the provision of an alternative automatic dishwashing composition.

- 5.3.4 Since the tests contained in the patent alone confirm that the technical problem underlying the invention, as invoked by the Respondent, has been successfully solved by a composition according to claim 1, there is no need to consider the additional experiments filed by the Respondent nor the requests filed in this connection by Appellant/Opponent 1 (see point VI above).
- 5.4 The only question to be answered for evaluating inventive step of the claimed subject-matter is thus whether the skilled person, starting from a "2 in 1" or "3 in 1" tab having the automatic dishwashing composition of D1 and differing from the claimed subject-matter by the absence of a carboxylate/sulfonate polymeric dispersant, would have envisaged to add such a dispersant to the composition of D1 with the expectation of obtaining a composition able to provide improved drying of the washed articles, especially plastic items, also in the absence of a rinse aid.
- 5.4.1 As explained above, it was neither common general knowledge nor was it known from the prior art that the selected non-ionic surfactants of formula (1) and/or the carboxylate/sulfonate polymer could have a particular effect on the drying of the washed items, especially plastic items.
- 5.4.2 The Board notes that carboxylate/sulfonate polymers were known for their use in automatic dishwashing operations as polyphosphate and silicate scale inhibitors, and as having good filming inhibition on glasses and dishes (see D6 (EP 0 877 002), D7 and D15), however their contribution to good drying in combination with the non-ionic surfactants of claim 1, especially on plastic items, was disclosed for the first time in the patent (see page 3, lines 2 to 4).

- 5.4.3 D1 (page 18, line 29) indeed suggests to add dispersants to the compositions comprising esterified alkyl alkoxyated surfactants according to formula (1) of claim 1 at issue; it however does not disclose the carboxylate/sulfonate polymers of claim 1 as being such a dispersant, nor does it specify for which kind of application such dispersants could be useful.
- 5.4.4 Therefore, in the light of the disclosure of D1, the skilled person would not have tried the combination of the disclosed esterified alkyl alkoxyate surfactants of formula (1) with the known carboxylate/sulfonate polymers of D6, D7 or D15 with the expectation of improving the drying of the items, especially plastic items, washed with the automatic dishwashing composition of D1 without the need of using a rinse aid.
- 5.5 The Board thus concludes that the subject-matter of claim 1 involves an inventive step (Article 56 EPC).
- 5.6 The same conclusion applies to the dependent claims 2 to 8 and to independent claims 9 and 10, relating to methods wherein the inventive composition of claim 1 is applied, as well as to claim 11 concerning the use of such a composition.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar:

The Chairman:



D. Magliano

J.-M. Schwaller

Decision electronically authenticated