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**Datasheet for the decision
of 28 September 2023**

Case Number: T 0062/21 - 3.3.06

Application Number: 10182483.7

Publication Number: 2261313

IPC: C11D3/00, C11D3/33, C11D3/20,
C11D3/37

Language of the proceedings: EN

Title of invention:
Composition

Patent Proprietor:
Reckitt Benckiser Finish B.V.

Opponent:
Henkel AG & Co. KGaA

Headword:
MGDA containing dishwashing composition / RECKITT BENCKISER

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 12(3), 12(5)

Keyword:

Inventive step (claim 1 as granted) - (no)

Admittance into the proceedings of auxiliary requests 1 to 3 -
(no)

Decisions cited:

Catchword:



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Chambres de recours

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Case Number: T 0062/21 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 28 September 2023

Appellant: Henkel AG & Co. KGaA
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 December 2020
rejecting the opposition filed against European
patent No. 2261313 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: L. Li Voti
J. Hoppe

Summary of Facts and Submissions

- I. The opponent's appeal is against the decision of the opposition division to reject the opposition against European patent no. 2 261 313.
- II. In its statement of grounds of appeal the appellant submitted that the claims as granted lacked an inventive step over document **D2** (WO 03/006594 A1) taken in combination with the teaching of **D5** (WO 97/49792 A1). **D8** (Technical Bulletin "*TRILON[®] M Liquid Chelating Agent*" by BASF Corporation, 2003) and **D9** (Provisional Technical Information "*Trilon[®] ES 9964*" by BASF, May 1995) were also cited.

In its reply the respondent (also patent proprietor) defended the patent as granted and resubmitted auxiliary requests 1 to 3 filed on 13 January 2020 during opposition proceedings.

- III. None of the parties replied to the board's preliminary opinion according to which claim 1 as granted appeared to lack an inventive step over the combination of D2 with D5 and that it appeared necessary to discuss the admissibility of the auxiliary requests.
- IV. The respondent informed the board that he would not be represented at the scheduled oral proceedings.
- V. In accordance with Article 15(3) RPBA 2020 oral proceedings were then held on 28 September 2023 in the absence of the respondent. The final requests of the parties were established as being the following:

The appellant (opponent) requested that the decision under appeal be set aside and the patent be revoked.

The respondent (patent proprietor) requested in writing that the appeal be dismissed or, as an auxiliary measure, that the patent be maintained in amended form on the basis of one of auxiliary requests 1 to 3 filed on 13 January 2020.

VI. Independent claim 1 as granted (**main request**) has the following wording:

*"1. A dishwasher detergent composition, comprising:
- a strong biodegradable builder, wherein the strong biodegradable builder is methyl-glycine-diacetic acid or a salt thereof; and
- a sulfonated polymer, wherein the sulphonated polymer includes, as a or the monomer unit, 2-acrylamido-2-methyl-1-propanesulfonic acid;
wherein the composition produces a washing liquor that has a pH of 5.5 to 7.8 when dissolved 1 : 100, wt : wt, composition : water, in de-ionised water at 20°C, measured using a conventional pH meter."*

Claim 1 according to **auxiliary request 1** differs therefrom in that the *"composition is provided without phosphorous-containing compound(s)"*.

Claim 1 according to **auxiliary request 2** differs from claim 1 as granted in that the composition is *"in the form of a solid body"*.

Claim 1 according to **auxiliary request 3** differs from claim 1 as granted in that *"the composition is provided without phosphorous-containing compound(s)"* and *"is in the form of a solid body"*.

Reasons for the Decision

Inventive step (Article 56 EPC) - Patent as granted

1. Claim 1 as granted relates to a detergent composition for machine dishwashing comprising methyl-glycine-diacetic acid or a salt thereof (**MGDA**), and a sulfonated polymer including at least one 2-acrylamido-2-methyl-1-propanesulfonic acid monomer (**AMPS**). Moreover, its 1% solution in de-ionised water at 20°C (in the following "**solution pH**") provides a pH of 5.5 to 7.8.

As stated in the patent (paragraphs [0007] - [0011]) the more environmentally friendly biodegradable complexing agents used in the background art for replacing phosphates have low complexing action or inferior builder performance, and dishwasher compositions containing them are only effective at a relatively high pH and need pH adjusting agents causing filming and spotting on dishes. Moreover, repeated wash cycles can lead to glass and machine corrosion, and lime-scale build-up, even on dishes.

Therefore, it is an object of the invention (paragraph [0012] of the patent) to obviate/mitigate the issues outlined above and/or offer detergent compositions with usage and/or environmental benefits.

2. **D2**, held by both parties as representing the closest prior art, relates (page 1, lines 1-3 and page 3, last full paragraph) to an aqueous liquid machine dishwashing composition which needs to be dosed only once and performs equally or better than conventional compositions needing three different dosing (salt-

cleaner-rinsing agent) or 2-in-1 compositions. The purpose of D2 (page 4, lines 1-4) is the provision of compositions having favourable rheological features and product characteristics (including cleaning performance) and which can be easily prepared.

One of the preferred builders being a citrate (D2, page 4, lines 29-30), this prior art similarly concerns the provision of a machine dishwashing composition with usage and environmental benefits. Therefore it is a suitable starting point for the evaluation of inventive step.

2.1 In the absence of any illustrative example in D2, the closest prior art is represented by the composition disclosed in claim 1 and page 4, lines 12-19, which comprises 20 to 50% by weight of a water-soluble builder, 0.1 to 70% by weight of a copolymer made of unsaturated carboxylic acids, monomers comprising sulfonic acid groups and optionally other ionic or non-ionic monomers, and 5 to 30% by weight of non-ionic surfactants. The closest prior art thus differs from the subject-matter of claim 1 at issue in that it neither comprises MGDA nor an AMPS polymer as claimed, and in that its solution pH is not disclosed.

2.2 The patent does not contain any direct comparison with this closest prior art, but states in paragraph [0010] that dishwasher detergent formulations comprising citrate salts, i.e. one of the preferred water-soluble builders of D2 (page 4, lines 29-30; page 30, lines 1-8), have inferior building performance than those comprising phosphorus builders and have poor activity at temperatures above 45°C. This is confirmed by the table on paragraph [0073] of the patent showing that

MGDA has better CaCO_3 dispersing capacity than trisodium citrate and similar to that of polyphosphate.

Table 1 of the patent however shows that a composition comprising MGDA and citrate removes better tea stains at a pH of 7.5 than one comprising only citrate as builder. The performance as regards the removal of all other stains tested, including starch-dried oat flakes, is instead not significantly better and thus similar to that attained with the comparative composition, as acknowledged in paragraph [0086] of the patent. The board thus cannot agree with the decision under appeal that Table 1 would also show a cleaning improvement as regards some starchy stains. However, it seems credible in view of Table 1 that a composition as claimed has better building performance and cleaning efficiency on tea stains even at a pH close to neutrality than the closest prior art.

The technical problem solved over D2 is thus to be formulated as the provision of a further machine dishwashing composition with environmental benefits and better building performance and cleaning properties on tea stains at a pH close to neutrality.

- 2.3 In this respect, it is noted that D2 (page 8, last three full paragraphs) also discloses that sulfonated polymers provide a better cleaning effect, with AMPS being even one of the preferred polymers (D2, page 10, lines 17-18), as in the patent in suit. Therefore, in the board's view, it was obvious for the skilled person faced with the above mentioned technical problem to add such AMPS polymer in order to improve cleaning.
- 2.4 In its claim 13, D2 further discloses that the claimed compositions may have a solution pH of 7, and so, in

the board's view, it was also obvious for the skilled person to adjust the pH of the compositions of D2 to a neutral pH, and to expect similar advantages as those disclosed in the patent.

- 2.5 The board observes that D2 (page 30, lines 1-9) also discloses that aminocarboxylic acids or salts thereof are suitable water-soluble builder alternatives for citrate builders, but the aminocarboxylic builder MGDA is not explicitly mentioned.
3. **D5** (page 4, lines 12-25) however discloses the use of such MGDA in a liquid machine dishwashing composition in order to provide a better removal of difficult stains, such as tea stains, at lower pH. In particular, it discloses (claim 3) that the pH of a 0.5% solution of such a composition can be from 6 to 10.4, thus encompassing a pH of 5.5 to 7.8 for a 1% solution as required by claim 1 at issue. Further, the examples on page 18 of D5 show that the replacement by MGDA of builders like NTA (one of the alternative organic builders also disclosed in D2: page 30, line 5) provides improved removal of tea stains. From D5 (page 5, fourth full paragraph and table in paragraph [0073]), it was further known that the MGDA builder has excellent building capacities in dishwashing formulations, since building values similar to those reported the patent in suit are disclosed there, as well as also in documents D8 (left column, second sentence) and D9 (page 15).
- 3.1 Therefore, in the board's view, it was obvious for the skilled person in view of the above teaching of D5 to try MGDA in the compositions of D2 as an aminocarboxylic acid builder in addition to citrate in order to improve the tea stain removal and the building

performance at a solution pH of 7, as explicitly disclosed in claim 13 of D2 and encompassed by D5.

4. The board therefore concludes that the subject-matter of claim 1 at issue was obvious from the combined teachings of documents D2 and D5, and so lacks an inventive step under Article 56 EPC, with the patent as granted thus not complying with the requirements of the EPC.

5. *Admittance of auxiliary requests 1 to 3*

5.1 The respondent filed three auxiliary requests with its reply to the grounds of appeal. As regards the reasons for filing these additional requests at this stage of the proceedings, it stated (page 6) that "*As precautionary measurement we resubmit the three Auxiliary Requests as previously filed on 13 January 2020*", without explaining why these requests were deemed to overcome the objections raised against the main request.

In the board's view, the above statement does not comply with the requirements of Article 12(3) RPBA 2020, according to which also the reply to the statement of grounds of appeal shall contain a party's complete appeal case and set out clearly and concisely the reasons why it is requested that the decision under appeal be amended, thereby specifying expressly all the arguments and evidence relied on.

5.2 In the absence of explanation of the reasons for the filing of auxiliary requests 1 to 3, the board has decided under Article 12(5) RPBA 2020 not to admit them into the appeal proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



A. Pinna

J.-M. Schwaller

Decision electronically authenticated