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Datasheet for the decision
of 11 November 2013

Case Number: T 0069/11 - 3.3.06
Application Number: 04798044.6
Publication Number: 1694810
IPC: C11D17/00, C11D3/50, C11D11/00
Language of the proceedings: EN

Title of invention:
Detergent granules and process for their manufacture

Patent Proprietors:
Unilever N.V.
Unilever PLC

Opponent:
Henkel AG & Co. KGaA

Headword:
Granulate detergent comprising an encapsulated perfume / UNILEVER

Relevant legal provisions:
EPC Art. 52(1), 56, 114(2)
RPBA Art. 12(4), 13(1), 13(3)

Keyword:
Late-filed evidence - admitted (no)
Inventive step - (yes)

Decisions cited:
Catchword:
Case Number: T 0069/11 - 3.3.06

DECISION of Technical Board of Appeal 3.3.06
of 11 November 2013

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Decision under appeal: Interlocutory decision of the Opposition
Composition of the Board:

Chairman: B. Czech
Members: P. Ammendola
U. Lokys
Summary of Facts and Submissions

I. This appeal of the Opponent is from the interlocutory decision of the Opposition Division concerning the maintenance of European patent No. 1 694 810 in amended form.

II. The Opponent had sought revocation of the patent in suit on the grounds of lack of novelty and lack of inventive step (Article 100(a) EPC) in view of, inter alia, documents:

D1 = GB 2 140 820 A;

D5 = WO 01/04257 A1;

D7 = US 2003/0092600 A1;

D8 = EP 0 436 729 A1;

D9 = EP 1 241 294 A2

and

D11 = WO 01/49817 A2.

III. In the course of the opposition proceedings, the Patent Proprietors had filed a set of eleven claims labelled "Main Request" (hereinafter simply claims 1 to 11) with a letter of 15 March 2010.

A second set of claims labelled "Auxiliary Request" had been filed by the Patent Proprietors during the opposition proceedings under cover of a letter dated 6 October 2010.
Independent Claims 1 and 6 according to sai Main
Request read as follows:

"1. A granulate detergent product comprising coated
granules which comprise a functional core which
comprises surfactant, the coated granules further
comprising up to 10% by weight of a coating which
comprises encapsulated perfume in the form of
melamine-urea-formaldehyde microcapsules."

"6. A process for making a granulate detergent
product, the process comprising:

   (i) providing a powdered and/or granulated
detergent composition comprising one or more
detergent agents selected from surfactants,
softening materials and detergency builders;

   (ii) preparing a slurry comprising water and an
encapsulated perfume;

   (iii) spraying the detergent composition with said
slurry to form coated granules."

Dependent claims 2 and 3 define preferred embodiments
of the granulate detergent product of claim 1. Claims 4
and 5 define particulate detergent compositions
comprising the granulate detergent product according to
claim 1. Dependent claims 7 to 10 define preferred
embodiments of the process of claim 6. Claim 11 defines
a process of preparing a detergent composition which
comprises the process of claim 6.

IV. The Opposition Division found in particular that the
subject-matter of the amended claims 1 to 11 was novel
and also based on inventive step for the following reasons:

Document D1, which concerned the provision of perfume-containing carriers to enhance the substantivity of perfume to laundered fabrics (see document D1 page 1, lines 5 and 6, page 7 line 22 and claim 1), represented the closest prior art with regard to the product of claim 1.

The latter was found to be a non-obvious alternative to this prior art, inter alia, because neither document D1 nor the other available documents suggested the possibility of coating the surface of surfactant-containing granules (hereinafter S granules) with perfume encapsulated in melamine-urea-formaldehyde microcapsules (hereinafter MUF microcapsules).

As to the process of claim 6, the Opposition Division considered the addition of perfume-containing microcapsules to detersive granules disclosed in document D11 (see claim 1, page 11, lines 20 to 27, and page 18, lines 31 to 34) to be the closest prior art. The difference between the claimed process and that disclosed in document D11 resided in that the former required - in addition to the preparation of a slurry comprising water and an encapsulated perfume - the step "(iii)" in which the slurry of encapsulated perfume was sprayed onto granules containing surfactants, softening materials or detergency builders (hereinafter these three sorts of granules are collectively indicated as S SM or DB granules) so as to form coated granules.

The provision of a process which does not suffer from undesirable cluster or agglomerate formation and of subsequent loss of perfume (see paragraphs [0003] and
[0004] of the patent in suit) was considered by the Opposition Division to be the objective technical problem starting from document D11.

The solution proposed in claim 6 was considered inventive, inter alia, because no cited prior art document suggested spraying water dispersions of encapsulated perfume for forming a coating onto S SM or SB granules.

V. The Opponent (hereinafter Appellant) in its statement of grounds of appeal raised only issues of inventive step, relying essentially on the documents listed under point II supra.

VI. The Patent Proprietors (hereinafter Respondents) did not reply in writing to said statement of grounds.

VII. The Board summoned the Parties to oral proceedings to be held on 11 November 2013.

VIII. With a letter dated 11 October 2013 the Appellant filed document

\[ D13 = \text{US-A-5,066,419 A}. \]

IX. At the oral proceedings, which took place as scheduled in the presence of both Parties, the discussion focused on:

- the Appellant's objections that the subject-matter of claim 1 was obvious for the skilled person starting from document D1 and that the subject-matter of claim 6 was obvious for the skilled person starting from document D11
and

- the admissibility of late-filed document D13.

X. The Appellant requested that the decision under appeal be set aside and the patent be revoked.

The Respondents requested that the appeal be dismissed or, in the alternative, that the patent be maintained on the basis of the Auxiliary Request submitted with letter dated 6 October 2010.

XI. The Parties' arguments of relevance with respect to the Proprietors' Main Request can be summarised as follows.

The Appellant considered that the product of claim 1 could contain minuscule amounts of perfume-containing MUF microcapsules, coating only a minimal part of the surface of the S granules, and, thus, was deprived of any inventive merit.

In any case, the subject-matter of this claim represented an obvious alternative to the prior art disclosed in document D1 and, in particular, to the product of the process disclosed on page 7, lines 9 to 54, of this citation. In the opinion of the Appellant, substantially all the features of claim 1 were disclosed in D1, except for a perfume-containing coating made of MUF microcapsules. It conceded at the oral proceedings that MUF microcapsules were hard and non-sticky and, thus, quite different from the fine clay particulate, adsorbed with perfume and fabric adhesive agent, forming a porous and/or sticky coating onto the S granules of document D1. Nevertheless, the Appellant stated that a skilled person would have considered obvious to replace the specific perfume-
carrier described in D1 with other known perfume-containing particles, such as, for instance, those in the form of MUF microcapsules which, as explicitly acknowledged in the patent in suit, were already commercially available.

In its written submissions the Appellant considered the subject-matter of claim 1 to be obvious also in view of document D7, which disclosed the addition of fragrance encapsulated in water-soluble (but ethanol-insoluble) agar to an inorganic salt particulate previously sprayed with an ethanol solution of PVP (see Example 1 of document D7, in particular paragraph [0018], in combination with claim 1).

The Appellant considered the subject-matter of claim 6 to be an obvious way to provide homogeneity to the granulate detergent product that document D11 disclosed as being obtainable by combining detergent ingredients with perfume-containing microcapsules in liquid form. In this connection, it referred to the following parts of document D11: the example on page 22 in combination with page 11, lines 20 to 25, and with page 18, lines 31 to 34. In particular, common general knowledge rendered obvious for a skilled person who aimed for a homogenous combination of these ingredients, to spray the microcapsules in a liquid formulation onto preformed S granules. This common general knowledge was illustrated, for instance, by documents D7 to D9.

In its written submissions the Appellant considered the subject-matter of claim 6 to be equally obvious also in view of document D5 which, similarly to document D11, also disclosed the preparation of aqueous dispersions of perfume-containing microcapsules to be combined with
detergent ingredients so as to form a granulate detergent product. In this connection, it referred to the following parts of document D5: the examples in combination with page 15, lines 12 to 14 and 44 to 47, and with page 23, lines 1 to 4.

As to the alleged high relevance and, hence, admissibility of the admittedly belated document D13 into the appeal proceedings, the Appellant stressed that this citation not only proved that the use of MUF microcapsules in laundry detergent compositions was already known in the prior art, but also explicitly suggested at column 10, lines 35 to 39, to mix and dry an aqueous slurry of perfume-containing MUF microcapsules with other components of the granular detergent composition. Thus, document D13 was very relevant since it called into question the involvement of an inventive step regarding the subject-matter of both claims 1 and 6.

The **Respondents** rebutted the Appellant's construction of claim 1, stressing that it would be unreasonable for a skilled person to presume that the claimed subject-matter extended *in extremis* to products unable to provide any fragrance during and/or after its use due to an insufficient amount of MUF in the coating. Moreover, the fact that this claim qualified the granules in the product as "coated" was another reason to conclude that a substantial amount of microcapsules had to be present in order to create an appreciable distinction between the chemical composition present at the core of the granules and that present at their surface.

The Respondent stressed that none of the available citations disclosed the possible use of MUF
microcapsules to form a coating onto S granules and disputed the Appellant's statement that it would be obvious for the skilled reader of document D1 to predict that any other known fine particulate containing perfume could also be used to generate a perfume-containing coating onto S granules. Moreover, the agglomerated particles disclosed in document D1 had a completely different structure when compared to the claimed subject-matter. In particular, in the particles containing a perfume disclosed in this citation the coating was porous and sticky and, thus, substantially different from the coating that a skilled person could possibly expect obtainable upon using e.g. the commercially available hard and non-sticky MUF microcapsules.

As to the process of claim 6, they stressed that document D11 did not mention spraying of an aqueous slurry of encapsulated perfume onto S SM or DB granules, but only mentioned in general the possible addition of microcapsules - in a liquid preparation or in previously spray-dried form - to conventional detergent ingredients, to form liquid or particulate detergent compositions.

Documents D7 to D9, did not relate to detergent products and were, moreover, silent on spraying any slurry of microcapsules onto a granulated product to form a coating on this latter.

Hence, none of the documents cited by the Appellant rendered obvious for the skilled person starting from document D11, to arrive at the sequence of steps required in claim 6.
As to document D13, the Respondents argued that it had not only been filed unacceptably late, but that it also did not disclose or suggest specifically the possibility of spraying the perfume-containing MUF microcapsules onto preformed larger S granules or any other admixing technique necessarily resulting in a coating of the former onto the latter. Thus, this citation was also not highly relevant for any of the claimed inventions.

Reasons for the Decision

Non-admission of late-filed document D13

1. The Appellant only filed document D13 after having been summoned to oral proceedings, one month before the date of the oral proceedings before the Board.

Therefore, it lies within the discretionary power of the Board to admit it or not into the proceedings (Article 114(2) EPC).

1.1 Upon filing D13, the Appellant merely stated that this document was retrieved "in preparing for the oral proceedings".

Considering that

i) the claim requests pending before the Board had already been submitted in the course of the first instance proceedings,

ii) that the argumentation regarding inventive step over document D13 is unrelated to the argumentation previously presented and thus constitutes a new and
different attack, which inevitably increases the complexity of the case by raising issues not previously dealt with,

the Board does not accept this mere statement as an acceptable explanation for the belated filing of D13.

1.2 Already for these reasons, the Board has strong reservations concerning the admissibility of document D13 at this late stage of the proceedings (Articles 12(4) and 13(1)(3) RPBA).

1.3 In any case, the Board does not accept the Appellant's argument that D13 of such a high relevance that it had to be admitted and considered.

More particularly, as regards the prima facie relevance of the disclosure of D13, the Board observes the following:

1.3.1 The Appellant stressed that document D13 discloses the use of MUF microcapsules in detergent compositions for laundry. In particular, the disclosure on column 10, lines 35 to 39, of document D13 (reading "The slurry containing the perfume particles can be used directly, e.g., admixed and dried with other components of the granular detergent formulations, or the particles can be washed and separated, and dried if desired.") would be highly relevant for the assessment of inventive step in respect to both claim 1 and 6.

1.3.2 It was, however, observed by the Respondents and not disputed by the Appellant, that said cited passage does not explicitly disclose, imply or potentially suggest admixing techniques necessarily resulting in a coating of perfume-containing MUF microcapsules onto larger
granules, let alone the specific admixing technique of spraying a slurry of the former so as to form a coating onto the latter.

Hence, this citation is *prima facie* not of higher relevance than the prior art documents on file (compare with points 2.2.1, 2.6.4, 4.2.1, 4.6.3 and 4.6.4 below).

1.4 Therefore, the Board decided not to admit this document into the proceedings.

**Respondents' Main Request**


2.1 The invention

According to a first aspect, the invention concerns a granulate detergent product comprising an encapsulated perfume (patent in suit, paragraph [0001]).

According to the patent in suit (paragraphs [0002] to [0005]), the product according to the invention overcomes several shortcomings of previously known detergent products comprising encapsulated perfume, i.e. in inefficacy in delivering the perfume, perfume loss or undesirable cluster formation.

2.2 Closest prior art

2.2.1 The Board accepts the view of the Appellant that document D1 can be considered to disclose the closest prior art, since it relates to particulate detergent products which comprise a perfume-containing carrier and detergent components (D1: claims 1 and 13 in
combination with page 1, lines 5 to 9; page 2, lines 27 to 36, and page 7, lines 9 to 54).

In particular, the disclosure on page 7 of document D1 describes the formation of agglomerate particles consisting of S granules and having a surface coating of a much finer clay mineral particulate. The coated agglomerate then undergoes to sorption of perfume and fabric adhesive agent, thereby rendering the clay mineral particulate in the surface coating (also) a carrier for the perfume.

2.2.2 In writing, according to another line of argument, the Appellant submitted that the product of claim 1 was obvious for the person skilled in the art starting from the bath salts disclosed in e.g. example 1 of document D7.

However, for the Board, D7 does manifestly not qualify as the closest prior art for the assessment of inventive step considering that this document does not relate to granular detergent products, which usually contain substantial amounts of organic compounds, but to almost purely inorganic bath salt granules.

2.3 Technical problem

The Board sees no reason for departing from the finding of the Opposition Division that starting from the closest prior art disclosed in D1 the technical problem can be seen in the provision of further granular detergent compositions carrying a perfume, i.e. the provision of an alternative to the prior art.
2.4 Solution

As a solution to this problem, the patent in suit proposes the granular detergent product according to claim 1 at issue, which is characterised in that comprises "coated granules which comprise a functional core which comprises surfactant, the coated granules further comprising up to 10% by weight of a coating which comprises encapsulated perfume in the form of melamine-urea-formaldehyde microcapsules" (emphasis added).

2.5 Success of the solution

2.5.1 The Board considers plausible and has no reason to call into question the success of the proposed solution across the whole scope of claim 1.

2.5.2 According to one line of argument, the Appellant considered that, since claim 1 did not expressly set a minimum for the amount of perfume-containing MUF microcapsules, the claimed subject-matter extended to products containing ineffectively small amounts of perfume, e.g. amounts that are so minuscule to render impossible the perception of any fragrance at any time during or after the use of such products.

However, in the Board's judgement, claim 1 must be understood taking into account that the essential reason for adding a perfume to a detergent product is that of rendering perceivable the fragrance at some stage during or after the use of that product. Moreover, the fact that this claim qualifies the granules in the product as "coated" also implies that a substantial amount of microcapsules must be present in order to create an appreciable distinction between the
chemical composition present at the surface of the granules and that present at their core.

Accordingly, the Board concludes that the terms of claim 1, when given their proper contextual meaning, do not encompass granules coated with an amount of perfume-containing MUF capsules which is not fit for purpose.

2.6 Non-obviousness

2.6.1 It remains to be decided whether the skilled person would obviously consider modifying the products described in D1 in a manner leading to a product according to claim 1 at issue.

2.6.2 According to the Appellant, the claimed product differed from the particulate detergent composition of D1 essentially in that in the former the coating onto the S granules was made of MUF microcapsules encapsulating the perfume and not of finely divided clay comprising perfume absorbed therein, as well as fabric adhesive. The skilled person reading D1 would consider that any other known fine particulate containing perfume could be used instead of the clay mineral-based coating used according to D1. Thus, no inventive ingenuity would be necessary to foresee that also perfume-containing MUF microcapsules, indisputably already commercially available, were suitable alternative perfume-carrying components. Accordingly, the subject-matter of claim 1 was obvious in view of the teaching of document D1 and the commercial availability of perfume-containing MUF microcapsules.

2.6.3 The Board notes, however, that the Appellant's statement, according to which it would be obvious for the skilled reader of document D1 that any other known
fine particulate containing perfume could also be used to generate a perfume-containing coating onto S granules, was disputed by the Respondents. Since, the Appellant has provided no evidence in support of this disputed statement, the Board cannot take said statement into consideration.

On the contrary, considering the manifest differences between the perfume-carrying particles described in D1 and the commercially available perfume-containing MUF microcapsules the Board concludes that the former are no evident alternative to the latter, as was also convincingly argued by the Respondents. Indeed, whereas the fine clay mineral particles present in the surface coating disclosed in document D1 are manifestly porous and, after having absorbed perfume and fabric adhesive, also sticky, it is undisputed that the commercially available perfume-containing MUF microcapsules are hard and non-sticky.

Moreover, none of the other documents cited by the Appellant in the appeal proceedings discloses or suggests the use of perfume-containing MUF microcapsules to form a coating onto S granules.

In particular, documents D5, D7 to D9, and D11 do neither disclose nor imply the possibility to form any coating of perfume-containing particles onto another particle, wherein the former are at least similar to the perfume-containing MUF microcapsules and the latter is at least similar to the agglomerate of document D1 or to any other form of conventional S granules. As a matter of fact:

(a) Documents D5 and D11 (see D5 page 15, lines 12 to 14 and 44 to 47; and D11 page 11, lines 20 to 27)
provide no details as to how the microcapsules disclosed therein are to be combined with the other ingredients of detergent compositions. Hence, the provided indications do not necessarily imply that these microcapsules form a coating onto the surface of other particles.

(b) Document D7 does not even belong to the field of detergents. Moreover, it specifically discloses exclusively the direct addition of (previously dried) perfume-containing microcapsules made of water soluble agar, to particulate inorganic salts (previously coated with a layer of PVP wet of ethanol) so as to generate a coating onto the inorganic salts (see document D7, the bath salt of Example 1). The microcapsules used in this citation are not comparable to MUF microcapsules, if only because the latter are not expected to be as water soluble as those made of agar, and because the almost purely inorganic salt granules of document D7 differ from conventional S granules, such as those of document D1, which normally also comprise substantial amounts of organic compounds (D1: table on page 11).

(c) Documents D8 and D9 do also not belong to the field of detergents. Moreover, they disclose exclusively the application of perfume-containing microcapsules onto fabric/textile (final) substrates (see the examples and claim 14 of document D8 and the examples and claim 1 of document D9), i.e. substrates which are manifestly of a very different nature than conventional S granules.
2.6.5 The Board comes, therefore, to the conclusion that the Appellant's objection starting from document D1 is not convincing if only for the reason that neither this citation nor the remaining available prior art discloses or suggests to use perfume-containing MUF microcapsules to coat S granules as required by claim 1 at issue.

2.7 The Board concludes that the subject-matter of claim 1 involves an inventive step (Articles 52(1) and 56 EPC 1973).

3. Inventive step - Dependent claims 2 to 5

These claims are directed to preferred embodiments of the inventive granulate detergent product of claim 1 (claims 2 and 3) and to particulate detergent compositions comprising the inventive granulate detergent product according to claim 1 (claims 4 and 5).

Consequently, their subject-matter likewise involves an inventive step (Articles 52(1) and 56 EPC 1973).


4.1 The invention

According to a second aspect, the invention concerns a process for making a granulate detergent comprising encapsulated perfume (patent in suit, paragraphs [0001] and [0010]).

According to paragraphs [0003] and [0004] of the
patent in suit this process should not give rise to an avoid undesirable cluster or agglomerate formation and a subsequent loss of perfume.

4.2 Closest prior art

4.2.1 The Board accepts that each of documents D5 and D11 can be considered to disclose the closest prior art, since they both relate to the production of detergent compositions making use of an aqueous slurry of perfume-containing microcapsules (D5: claims 1 and 11 and examples 1 and 2; D11: claims 1, 7 and 9, and the example on page 22).

More particularly, document D5 (on page 15, lines 12 to 14 and 44 to 47, and on page 23, lines 1 to 4) as well as document D11 (on page 11, lines 20 to 27, and on page 18, lines 21 to 34) disclose in general terms the possible use of the aqueous slurries of perfume-containing microcapsules (as well as of the dried microcapsules resulting from these slurries) to formulate granulate detergents products.

4.2.2 These documents are thus substantially equivalent in their relevant disclosure. In the following, the Board therefore addresses the Appellant's inventive step objections only starting from the disclosure of document D11. However, the reasons given hereinafter in this respect apply mutatis mutandis when starting from the substantially equivalent disclosure provided by document D5.

4.3 Technical problem

The Board sees no reason to depart from the finding of the Opposition Division that starting from D11 the
technical problem can be seen in the provision of a process for making a granulate detergent product comprising encapsulated perfume which results in less cluster or agglomerate formation and, thus, in a more homogeneous and stable distribution of the encapsulated perfume across the whole product.

4.4 Solution

As a solution to the stated technical problem the patent in suit proposes the process according to claim 6 which is characterised in particular in that it comprises treating a "powdered and/or granulated detersive composition" by "(iii) spraying the detersive composition with said slurry" of perfume-containing capsules "to form coated granules".

4.5 Success of the claimed solution

4.5.1 The Board considers plausible and that by virtue of step (iii), the process according to claim 6 provides less undesirable cluster or agglomerate formation and less of the subsequent loss of perfume, in comparison to a process according to the generic teaching in document D11, i.e. to some other form of contacting the aqueous microcapsule slurry with the further ingredients in the preparation of a granular detergent product.

4.5.2 Hence, the Board has no reason to call into question the success of the proposed solution across the whole scope of claim 6 at issue, which was also not disputed by the Appellant.
4.6 Non-obviousness

4.6.1 It remains to be decided whether starting from the rather generic information in D11, the skilled person would obviously consider providing a process with all the feature of claim 1 at issue.

4.6.2 In the opinion of the Appellant, spraying the slurry of microcapsules disclosed in document D11 onto detergent particles would be the **most obvious** option available to the skilled person armed with common general knowledge, illustrated by documents D7 to D9, as to the conventional application by spraying of slurries of encapsulated perfume, in order to obtain a homogeneous and stable distribution of this latter across other particulates.

4.6.3 The Board notes, however, that documents D7 to D9 neither belong to the technical field of detergents, nor mention at all spraying of a slurry of microcapsules (document D7) or spraying the slurry onto a granulate (documents D8 and D9, see also the comments on the disclosure provided in D7 to D9 already given above at point 2.6.4 "b)" and "c")).

4.6.4 Hence, it is immediately apparent to the Board that none of documents D11 and D7 to D9 discloses or potentially suggests the feature (iii) of claim 6 at issue, i.e. spraying the aqueous slurry of encapsulated perfume onto S SM or DB granules, so as to form a coating of the former on the latter.

Hence, the skilled person trying to solve the technical problem posed would not be induced by the cited prior art and/or common general knowledge to consider
implementing a process comprising the essential step "(iii)".

4.7 The Board concludes that the subject-matter of claim 6 involves an inventive step (Articles 52(1) and 56 EPC 1973).

5. Inventive step - Claims 7 to 11

Dependent claims 7 to 10 are directed to preferred embodiments of the inventive process of claim 6, and claim 11 is directed to a process including the inventive process of claim 6.

Consequently, the subject-matter of claims 7 to 11 likewise involves an inventive step (Articles 52(1) and 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed
The Registrar: D. Magliano

The Chairman: B. Czech

Decision electronically authenticated