

Internal distribution code:

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

D E C I S I O N
of 17 July 2006

Case Number: T 0204/05 - 3.3.06

Application Number: 96944574.1

Publication Number: 0876474

IPC: C11D 17/06

Language of the proceedings: EN

Title of invention:

A process for preparing a granular detergent

Patentees:

UNILEVER PLC et al

Opponents:

01: Henkel KGaA

02: The Procter & Gamble Company

Headword:

Granular detergent/UNILEVER

Relevant legal provisions:

EPC Art. 54, 83, 84, 111(1)

Keyword:

"Sufficiency of disclosure (main and auxiliary request): yes"

"Novelty (main request): no - claim 1 not excluding
intermediate processing steps not involving the build up of
particles"

"Novelty (auxiliary request): yes - clay is not a detergent
builder"

"Remittal: yes"

Decisions cited:

-

Catchword:

-



Case Number: T 0204/05 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 17 July 2006

Appellant: UNILEVER PLC
(Patent Proprietor) Unilever House
Blackfriars
London EC4P 4BQ (GB)

Representative: James, Helen Sarah
Unilever Patent Group
Colworth House
Sharnbrook
Bedford, MK44 1LQ (GB)

Respondents:
(Opponent 01) HENKEL KGaA
VTP (Patente)
D-40191 Düsseldorf (DE)

Representative: -

(Opponent 02) The Procter & Gamble Company
One Procter & Gamble Plaza
Cincinnati, OHIO 45202 (US)

Representative: Lawrence, Peter Robin Broughton
Gill Jennings & Every LLP
Broadgate House
7 Eldon Street
London EC2M 7LH (GB)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 23 December 2004
revoking European Patent No. 0876474 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: G. Rath
Members: L. Li Voti
U. Tronser

Summary of Facts and Submissions

- I. The present appeal is from the decision of the Opposition Division to revoke the European patent no. 0 876 474 concerning a process for preparing a granular detergent product.
- II. In their notices of opposition the two Opponents sought revocation of the patent on the grounds of Article 100(a) EPC, because of lack of novelty and inventive step of the claimed subject-matter, and of Article 100(b) EPC.

The following documents were referred to *inter alia* in support of the oppositions:

- (4): EP-A-0340004;
- (13): WO-A-94/28099.

- III. In its decision, which was taken in respect of the Patent Proprietor's main request (patent as granted) and first and second auxiliary requests filed under cover of the letter dated 24 November 2004, the Opposition Division found that
- the claimed invention was sufficiently disclosed;
 - claim 1 according to the main request and claim 1 according to the first auxiliary request lacked novelty *inter alia* in the light of documents (4) or (13);
 - claim 1 according to the second and to the third auxiliary request, respectively, did not meet the requirements of Article 123(2) EPC.

IV. An appeal was filed against this decision by the Patent Proprietor (Appellant) on 14 February 2005 and the appeal fee was duly paid on the same day. The statement setting out the grounds of appeal was filed on 19 April 2005.

Oral proceedings were held before the Board on 17 July 2006.

The Appellant filed during oral proceedings two amended sets of claims to be considered as main and auxiliary request, respectively.

Claim 1 according to the main request reads as follows:

"1. A process for producing a granular detergent component or composition containing anionic surfactant having a bulk density between 350 and 1000 g/l comprising mixing a particulate starting material in a low or high speed mixer/granulator, adding a liquid binder to the mixer/granulator and subjecting the resulting mixture to partial granulation, to produce a partially granulated mixture, transferring partially granulated mixture to a fluid bed or rotating bowl mixer/granulator, adding further liquid binder to the mixture for a time sufficient to complete granulation and thereby to obtain the granular powder composition of desired bulk density, wherein:
for a bulk density in the region of 350 - 650 g/l the process comprises the steps of: (a) adding from 5 to 75% by weight of the total amount of liquid binder to the low/high speed mixer/granulator; and (b) adding the remaining from 95 to 25% by weight of the total amount

of liquid binder in the fluid bed or rotating bowl mixer/granulator,
for a bulk density in the range 550 - 1000 g/l the process comprising the steps of: (a) adding from 75 to 95% by weight of the total amount of liquid binder in the low/high speed mixer/granulator; and (b) adding the remaining from 25 to 5% by weight of the total liquid binder in the fluid bed or rotating bowl mixer/granulator."

Dependent claims 2 to 4 according to the main request relate to particular embodiments of the claimed process.

Claim 1 of the set of 2 claims according to the first auxiliary request differs from claim 1 according to the main request insofar as it requires that the particulate starting material **comprises a detergent builder** and that **the partially granulated mixture is transferred to a fluid bed.**

V. The Appellant submitted during oral proceedings *inter alia* that

- the claimed invention was sufficiently disclosed;
- the wording of the claims allowed the use of different binders in the two granulation steps and the use of low or high speed mixer/granulators not having cutting means;
- moreover, the term "partial granulation" identified the granulation of a product to the desired extent; therefore, the terms "partial granulation" and

"complete granulation" represented similar process steps;

- the term "granulation", however, had to be interpreted as relating to the build up by agglomeration of particles having a greater average particle size and did not include the coating of particles wherein the particle size did not change substantially;

- moreover, the claimed process required the direct transfer of the product obtained by granulation in a low or high speed mixer/granulator into a fluid bed or rotating bowl mixer/granulator without any intermediate processing step;

- the particulate clay material used in documents (4) and (13) could not be considered to be a detergent builder as explained in document

(20): Powdered Detergents, M.S. Showell, 1998, page 57,

filed under cover of the letter dated 25 April 2006;

- therefore, the claims of both requests were novel over the cited prior art.

VI. The Respondents 01 and 02 (Opponents 01 and 02, respectively) submitted in writing and orally *inter alia* that

- the claimed invention was not sufficiently disclosed;

- the wording of the claims allowed the possibility of further processing steps between the two granulation steps;

- the term "granulation" had to be interpreted as relating to the build up by agglomeration of particles having either a different average particle size or a different particle size distribution or a different density;

- the clay material used according to documents (4) and (13) was a layered silicate having the capacity of exchanging ions; since layered silicates were indicated as detergent builders in the patent in suit (page 4, lines 52 to 53), this material had also to be considered as a detergent builder;

- the subject-matter of claim 1 according to the main and to the auxiliary request, respectively, lacked novelty in the light of documents (4) and (13); moreover, the subject-matter of claim 1 according to the main request lacked novelty also in the light of document (4).

VII. The Appellant requests that the decision under appeal be set aside and that the patent be maintained on the basis of the set of claims according to the main request or according to the auxiliary request both of them submitted during oral proceedings.

The Respondents request that the appeal be dismissed.

Respondent 02 requests also that, if the Appellant's main request or the auxiliary request is found to be

acceptable under Articles 123, 83, 84 and 54 EPC, the case be remitted to the department of first instance for the assessment of inventive step.

Reasons for the Decision

1. *Main request*

1.1 Article 123(2) EPC

The Board is satisfied that the claims according to the main request, as agreed by the Respondents during oral proceedings, comply with the requirements of Article 123(2) EPC.

1.2 Articles 83 and 84 EPC

Claim 1 according to the main request relates to a process for the preparation of a granulated detergent product having a bulk density between 350 and 1000 g/l comprising the steps of mixing a particulate starting material in a low or high speed mixer/granulator, adding a liquid binder to the mixer/granulator and subjecting the resulting mixture to partial granulation; transferring the granulated mixture to a fluid bed or rotating bowl mixer/granulator, adding further liquid binder to the mixture for a time sufficient to complete granulation and wherein the amount of liquid binder used in these two granulating steps is selected in dependence of the desired final bulk density (see claim 1 in point IV above).

As agreed by all the parties during oral proceedings, the binder material used in said two granulation steps can be different and the used low or high speed mixer/granulators may have no cutting means in the first granulation step; moreover, both the terms "partial granulation" and "complete granulation" identify the granulation of a product to the desired extent.

Also, the claimed process may comprise additional steps not specified in the claim.

As regards the term "granulation" itself all the parties agreed that it had to be interpreted as relating to the build up of particles by agglomeration.

The Board finds that, in the absence of shearing forces, such an agglomeration would necessarily lead to the build up of particles having a greater size; this is, however, not necessarily the case when the mixer/granulator contains cutting means since the formed particles are continuously broken up to a smaller size. Moreover, as accepted by all the parties during oral proceedings, a granulation step is usually accompanied by sieving steps for eliminating particles of undesired size, which sieving step can be carried out at the same time as the granulation or separately. Since claim 1 does not exclude other processing steps in addition to the two specified granulation steps, the product obtained after granulation can differ from the product before granulation either in the average particle size or in the particle size distribution or in its density.

This interpretation is in accordance with the disclosure of the patent in suit specifying that the granulation step produces, for example, particles having a different granulometry (see page 3, line 58 to page 4, line 5).

Furthermore, the wording of the claims does not require in the Board's view the direct transfer of the product exiting the low or high speed mixer/granulator into the fluid bed or rotating mixer but allows further intermediate processing steps not involving the build up of the particles such as a drying step or a milling or sieving step; in fact, the granulated product exiting the low or high speed mixer/granulator (so called partially granulated mixture) remains a partially granulated mixture, also if it is additionally dried, milled or sieved separately.

Finally, claim 1 and the description of the patent in suit give a clear teaching how to select the amount of liquid binder to be used in the respective agglomeration step in order to achieve a selected bulk density; however, for obtaining particles in the range of 550 to 650 g/l each of the two alternative ranges indicated in the claim can be used (see page 3, lines 34 to 41).

Therefore, the Board finds that the wording of claim 1 is clear and that the claimed invention can thus be carried out by the skilled person by following the teaching of the patent in suit.

Therefore, the requirements of Article 83 EPC are complied with.

1.3 Novelty

Document (4) discloses a process for the preparation of particulate detergent components comprising an anionic surfactant in which 100 kg of bentonite (clay particulate material) is loaded into an O'Brien mixer/agglomerator, oversprayed with an aqueous slurry of sodium dodecyl benzene sulphonate (anionic surfactant) containing 50.4% of active surfactant, 3.4% sodium sulphate and balance water (anionic surfactant and water being liquid binders), and granulated.

After completion of the agglomeration the particles are dried to a moisture content of 6% in a fluidized bed dryer, their particle size is reduced in a Stokes granulator and they are sieved to a particle size of between 12 to 100 or 12 to 120 sieve range. The dried agglomerated particles of desired particle size, i.e. particles which have been agglomerated in the first granulation step are then returned and thus transferred to the fluidized bed apparatus, wherein they are oversprayed with a 27% concentration, in water, of maleic-acrylic copolymer Sokolan CP-5 binder.

Both water as well as Sokolan CP-5 are liquid binders able to agglomerate particles (column 4, lines 61 to 65 and column 5, line 57 to column 6, line 3). Therefore, the fact that Sokolan CP-5 additionally strengthens the obtained beads does not mean that agglomeration does not take place.

The granulated product is dried and screened in the fluidized bed apparatus and half thereof is subsequently oversprayed with a dye solution in such a

fluidized bed. Finally, the agglomerated product is milled and screened again to a particle size between 12 to 120 and 12 to 100 sieves, i.e. to the same range of particle size before the treatment in the fluidized bed apparatus. The resulting product has a bulk density of 0.7 g/l (see column 17, line 1 to column 18, last line).

Since the particle size of the final product is comparable to that of the product entering the fluidized bed apparatus, the Board finds that the particles exiting the fluidized bed apparatus before screening and milling must necessarily have been of greater size than the starting particles and thus that an agglomeration must have taken place in the fluidized bed.

The amounts of liquid binders used in the O'Brien mixer/agglomerator and in the fluidized bed apparatus can be derived from the information given in document (4) and are respectively 83% and 17% by weight, as correctly found in the decision under appeal (point 6.1 of the reasons for the decision).

Therefore, document (4) describes a process having all the features of the process of claim 1 according to the main request.

Therefore, the subject-matter of claim 1 according to the main request lacks novelty over the disclosure of document (4) (Articles 54(1) and (2) EPC).

Since the main request fails already on these grounds there is no need to discuss document (13).

2. *Auxiliary request*

2.1 Article 123(2), 83 and 84 EPC

The subject-matter of claim 1 according to the auxiliary request differs from that according to the main request insofar as claim 1 requires that the particulate starting material **comprises a detergent builder** and that **the partially granulated mixture is transferred to a fluid bed.**

The Board is satisfied that the claims according to the auxiliary request comply with the requirements of Article 123(2) EPC and that the claimed invention is sufficiently disclosed for the same reasons put forward in points 1.1 and 1.2 above.

2.2 Novelty

The Board finds that some layered silicates are detergent builders. However, a clay material as used in documents (4) or (13), though being a layered silicate, would have not be considered by the skilled person to be a detergent builder, as clearly explained in document (20) which is a textbook representing the common general knowledge of the skilled person in this technical field (see page 57, lines 8 to 17).

Since the particulate starting material of the process disclosed in document (4) and discussed above and that used in document (13) (claim 7 and examples) does not comprise a detergent builder, the subject-matter of claim 1 is considered to be novel over the disclosure of these two documents.

3. *Remittal*

Although the claimed invention has been found to be sufficiently disclosed and the claims according to the auxiliary request have been found to comply with the requirements of Articles 84, 123(2) and to be novel over documents (4) and (13), it still has to be assessed whether these claims satisfy the other requirements of the EPC, in particular whether they involve an inventive step.

In the present case the decision under appeal was based on the grounds of Articles 123(2) and 54 EPC only.

Inventive step of the claimed subject-matter was discussed neither in the decision under appeal nor in the written submissions of the Appellant during the appeal proceedings which only indicated in the statement of the grounds of appeal the inventive purpose of the claimed process (see last five lines on page 4) but not why it had to be considered inventive over the cited prior art.

The Board finds thus that it was not appropriate to discuss during oral proceedings inventive step of the subject-matter of a claim which had not been discussed at first instance and for which the starting point for the evaluation of inventive step as well as the technical problem underlying the claimed invention in the light of this starting point has still to be debated.

Since Respondent 02 asked for the case to be remitted to the first instance for further prosecution and the other parties did not object to that, the Board finds that in order not to deprive the parties of the opportunity to argue the remaining issues at two instances, it is appropriate to exercise its powers under Article 111(1) EPC to remit the case to the department of first instance for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:

G. Rauh

G. Rath