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# Datasheet for the decision of 27 October 2010

**Case Number:** T 0762/09 - 3.2.06

**Application Number:** 01300812.3

**Publication Number:** 1121916

**IPC:** A61F 13/512

**Language of the proceedings:** EN

**Title of invention:**
Top sheet for disposable body fluids absorbent garment and method for making this topsheet

**Patentee:**
UNI-CHARM CORPORATION

**Opponent:**
The Procter & Gamble Company

**Headword:**
-

**Relevant legal provisions:**
EPC Art. 83, 56

**Relevant legal provisions (EPC 1973):**
-

**Keyword:**
"Main Request - sufficiency - no"
"Auxiliary Request 1 - novelty, inventive step - yes"

**Decisions cited:**
-

**Catchword:**
-

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**Case Number:** T 0762/09 - 3.2.06

# D E C I S I O N
**of the Technical Board of Appeal 3.2.06**
**of 27 October 2010**

**Appellant**: (Opponent)
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**Decision under appeal:**
**Interlocutory decision of the Opposition Division of the European Patent Office posted 27 January 2009 concerning maintenance of European patent No. 1121916 in amended form.**

**Composition of the Board:**

**Chairman:** P. Alting van Geusau
**Members:** G. de Crignis
K. Garnett

## Summary of Facts and Submissions

I. European Patent No. 1 121 916, granted on application No. 01 300 812.3, was maintained in amended form by the decision of the opposition division posted on 27 January 2009.

Claim 1 as maintained reads as follows:

"A top sheet (1) including a number of perforations (4) for covering a liquid-receiving surface of an absorbent article, wherein: the top sheet (1) is formed of a thermoplastic resin containing from 20 to 150 parts by weight of a particulate material relative to 100 parts by weight of the thermoplastic resin, and
the top sheet (1) is provided with convex portions of the particulate material on the surface thereof and a plurality of protrusions (5) extending from the surface thereof, each protrusion (5) having a height from the surface which is larger than that of each convex portion therefrom,
wherein the particulate material has a mean particle size falling between 0.1 μm and 30 μm and wherein the thermoplastic resin contains at least two types of particulate material that differ from each other in the mean particle size by at least 9 μm."

II. Concerning the corresponding request, the opposition division did not raise any formal objections and noted that the opponent had withdrawn the previously raised objections under Article 83 EPC with regard to the subject-matter of claim 3 as granted which now formed part of the subject-matter of claim 1. It held that the

subject-matter of claim 1 was novel (Article 54 EPC) over the disclosure in

D1 JP Kokai Patent application No. Hei 4[1992]-279160, English translation

D2 WO-A-94/20054

D3 EP-A-0 900 571

D4 US-A-6 277 104

D5 US-A-4 327 730

D6 US-A-4 463 045

D7 Abstract of JP-A-06-070955

D8 US-A-4 690 679

and also considered it to involve an inventive step (Article 56 EPC) when starting from D1 and combining it with the teaching of any of D2 to D8.

III. The appellant (opponent) filed a notice of appeal against this decision on 3 April 2009 and paid the appeal fee on the same day. On 5 June 2009 the statement of grounds of appeal was filed. The appellant requested the revocation of the patent and submitted that the subject-matter of claim 1 of the patent in suit did not involve an inventive step in view of D1 combined with common general knowledge.

IV. In a communication dated 28 May 2010 accompanying the summons to oral proceedings the board pointed out that it considered that the subject-matter of the amended claim 1, being based upon granted claims 1 to 3, gave rise to an objection under Article 83 EPC. In particular the subject-matter of granted claim 3 could only be verified when relating to a method step during manufacturing of the top sheet.

V. Oral proceedings were held on 27 October 2010.

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, alternatively that the decision under appeal be set aside and that the patent be maintained on the basis of the auxiliary request 1 filed during the oral proceedings.

Claim 1 of the auxiliary request 1 differs from claim 1 of the main request in that the last feature
"wherein the thermoplastic resin contains at least two types of particulate material that differ from each other in the mean particle size by at least 9 µm"
is replaced by
"wherein the thermoplastic resin contains two different types of particulate material that differ from each other in the mean particle size by at least 9 µm, the two different types of particulate material comprising 1 µm particles and 10 µm particles blended in a ratio of 40:60, wherein the total of the 1 µm and 10 µm particles falls between 20 and 150 parts by weight relative to 100 parts by weight of thermoplastic resin."

VI. The arguments of the appellant may be summarised as follows:

Independent claim 1 of the main request was based on granted claims 1 to 3. The combination of the features included a difference in mean particle size of at least 9 µm. No determination method or distribution ratio was specified. In combination with two types of particulate

material that differed from each other only in mean particle size, such a difference was not detectable in a finished top sheet. Hence, the skilled person would not know whether he was working in the claimed scope.

Independent claim 1 of auxiliary request 1 included further features. With regard to the distribution ratio, it was not clear from the passage specifying this ratio whether it was a number or weight ratio. Accordingly its subject-matter was not clear. However, it was accepted that the combination of features now enabled the skilled person to identify the claimed top sheet.

The subject-matter of this claim 1 differed from the teaching in D1 in that two different types of particles of a certain mean particle size and having a certain distribution were claimed. No evidence had been provided that this combination of features provided a top sheet having good touch and hence it represented just an alternative topsheet without any underlying inventive concept, nor was otherwise based on an inventive step.

VII. The arguments of the respondent may be summarised as follows:

Independent claim 1 of the main request was based on granted claims 1 to 3. It was not necessary to identify a determination method for the difference in mean particle size of the two types of particulate material. The skilled person would know whether or not he was working in the claimed scope as he could identify two peaks of the respective Gaussian curves of the two

types of material when assessing the particle size of the particulate material.

Independent claim 1 of auxiliary request 1 included further features which were clear but the combination of features claimed would not meet the requirements of Article 83 EPC if the equivalent objection as regards the main request was upheld. Therefore, in accordance with the conclusions in G 1/99, since it was not possible to further restrict the subject-matter allowed by the opposition division to avoid the objection made, the respondent should be allowed to go back to the granted version of the claims.

The subject-matter of claim 1 of the first auxiliary request differed from the teaching of D1 in that particles having two different mean particle sizes in a specific distribution ratio were claimed. The opposition division had correctly set out that the provision of two different types of particulate materials having different mean particle sizes provided an effect concerning smoothness of the topsheet, in particular when wet. No evidence had been provided to the contrary. Such a problem and solution was neither disclosed nor rendered obvious by any of the cited documents.

## Reasons for the Decision

1. The appeal is admissible.

2. *Main request*

2.1 Claim 1 as upheld by the opposition division combines the subject-matter of claims 1, 2 and 3 as granted. Accordingly, the requirements of Article 84 and 123 EPC are met.

2.2 The subject-matter of this claim 1 specifies, in addition to the features of granted claim 1, a range for the mean particle size of the particulate material and a specific difference in the mean particle size of at least two types of particulate material.

2.3 Any amended claim should meet all the requirements of the EPC. In particular the addition of the subject-matter of claim 3 as granted gives rise to an objection under Article 83 EPC for the claimed invention. The objection relates to the feature that "the thermoplastic resin contains at least two types of particulate material that differ from each other in the mean particle size by at least 9 µm". With regard to the "at least two types of particulate material", there is no other disclosure in the application as filed than that the two "types" relate to particles with a different mean particle size rather than particles of different material. This view was shared by the parties. Hence, the presence of "a" (i.e. one kind of) particulate material in the form of at least two types having different mean particle sizes is a feature of the product claimed and should be identifiable in the

product itself, since otherwise the skilled person will be unable to know with any certainty whether he is carrying out the invention or not.

2.4 No indication can be found in the patent in suit how this feature, being described in the method for producing the claimed product, should be determined in the finished product. The reference in paragraph [0008] of the patent in suit to the "mean particle size" being the size "obtained by measuring the major diameter of each particle of the particulate material that comprises a number of particles, following by averaging the resulting data" is not relevant for a determination method of the "at least two types of particulate material that differ from each other in the mane particle size by at least 9 µm".

2.5 Moreover, it is clear from this definition of the mean particle size that the determination of distinguishing different particle sizes largely depends on the distribution of the particle sizes in the mixture and is therefore possible only under very specific conditions (for example where there are only two very narrow ranges of particle sizes for which the mean particle size differs by at least 9 µm in combination with a distribution ratio of around 50:50). However such further conditions are not specified in either the claim or the description.

2.6 Moreover the feature specifies "at least" two types of particulate material that differ from each other in the mean particle size by at least 9 µm. There is no information as to how, in the case of a mixture of more than two types of particulate material comprising a

broad range of particle sizes, and the particles having either a steep Gaussian distribution of particle size or a more randomized size distribution, the particles that fulfil the condition can be distinguished from the particles that do not. In the absence of any information as to how a given distribution should be considered to belong to a given number ("at least two") of particle size types, a determination of individual particles according to their number and sizes, even if feasible when considering the lower range of the mean particle size, would lead to fully arbitrary answers to the question of whether the invention had been carried out or not.

2.7 For these reasons the Board comes to the conclusion that the invention claimed is not sufficiently clear and complete for it to be carried out by the person skilled in the art and that therefore the main request is not acceptable (Article 83 EPC).

3. *Auxiliary request 1*

3.1 Amendments

3.1.1 The subject-matter of claim 1 is limited to the embodiment having two types of particulate material, this being based upon page 7, last line to page 8, line 8 of the originally filed description, which is identical to paragraph [0023] of the published patent specification. Hence, the requirements of Article 123 (2) and (3) EPC are met.

3.1.2 With regard to clarity, the question whether the distribution ratio concerned a number or weight

distribution was raised during the oral proceedings. However, although this is not specified expressly in paragraph [0023], when reference is elsewhere made in the examples and the overall description of the patent in suit to a distribution ratio, the reference is to parts by weight. Hence, the skilled person would read the reference to a distribution ratio in paragraph [0023] as being to a weight distribution. Hence, the subject-matter of claim 1 is sufficiently clear to be understood by the skilled person (Article 84 EPC).

3.1.3 Furthermore these limitations avoid the Article 83 EPC objection because only two quite specific ranges of particle sizes for which the mean particle size differs by at least 9 µm are claimed, for which condition a determination of the two different particles sizes is feasible. The respondent has not given convincing reasons why this would not be possible, reference only being made to the difficulty and expense of such determination but not to its feasibility. Also the appellant was of the opinion that in the framework of the particular embodiment claimed, no objection under Article 83 EPC arose.

3.1.4 Therefore in agreement with the decision in G 1/99 the further examination of novelty and inventive step should take place on the basis of this new claim and the respondent should not be allowed to go back to the granted version of the claim.

3.2 Novelty

D1 (in translation) discloses an absorbent product having a liquid permeable outer sheet for covering a

liquid absorbent body (paragraph [0010]). The object in D1 is to provide a product which is soft, comfortable and does not have a "plastic" sensation (paragraphs [0001], [0006], [0009]). This object is met via the outer sheet which is formed of a thermoplastic resin (paragraph [0011]) containing from 20 to 150 parts by weight of a particulate material relative to 100 parts by weight of the thermoplastic resin (paragraph [0015]), and where the outer sheet is provided with convex portions of the particulate material on the surface thereof and a plurality of protrusions extending from the surface thereof (Figures 1 - 3), each protrusion having a height from the surface which is larger than that of each convex portion, and where the particulate material has a mean particle size falling between 3 µm and 50 µm (paragraph [0010]).

D1 does not disclose the final feature of claim 1 of the patent in suit which refers to two specific different types of particulate material which are blended in a specific ratio and which specifies the content of the particles in relation to the content of thermoplastic resin. Hence, the subject-matter of claim 1 is novel.

3.3 Inventive step

3.3.1 D1 represents the closest prior art. The topsheet of present claim 1 differs from the topsheet disclosed in D1 in the above identified feature.

3.3.2 Hence, when starting from D1 the objective technical problem to be solved is to be seen in the provision of a non-sticky top sheet having a good feel even when wet.

This is consistent with the object set out in paragraphs [0002], [0005] and [0021] of the patent in suit. The solution to this problem is to provide the topsheet with the claimed differently sized particles, which provide in the dry state a good feel and in the wet state a degree of surface roughness which retains the good feel in combination with non-stickiness.

3.3.3 Although D1 shows in its Figure 3 a film having particles of different sizes exposed on its surface, neither a particular distribution ratio nor exactly two types of particulate material are specified. In its Table 1, the mean particle size of the (one kind of) particles used in the inventive examples varies between 4.3 µm and 38.6 µm. Only one example lies below 10 µm and this example is the worst in the evaluation of smooth and soft sensation. When trying to avoid a "plastic" sensation of the plastic sheet, D1 refers in its paragraphs [0025] and [0024] to a roughness depth of the film surface which should be in the range of 10 to 60 µm, in combination with a certain pitch diameter (distance between the bump parts) and, additionally, the roughness shall be distributed irregularly in depth, pitch diameter and pattern. Hence, the skilled person with knowledge of such a teaching would be led away from the concept of lowering the mean particle size of any particles to below 10 µm. Moreover, D1 is not concerned at all about smoothness in a **wet** condition.

3.3.4 Therefore, common general knowledge would not lead the skilled person to depart from the teaching of D1 in the specific way claimed. Moreover, none of the cited documents refers to particles having such different mean particle sizes and distribution ratio.

3.3.5 Concerning the argument of the appellant that the problem is not credibly solved because the mean particle size is too small to obtain smoothness in a wet condition, the appellant has not provided any evidence in support of the argument.

3.3.6 Accordingly, the Board concludes that when starting from D1 and trying to solve the above cited problem, the teaching of D1 whether in combination with common knowledge or in combination with any other cited document would not lead the skilled person to the subject-matter of claim 1 without the use of an inventive step.

3.3.7 The subject-matter of claim 1 thus involves an inventive step. Claims 2 and 3 are directly dependant from claim 1 and relate to preferred aspects of the top sheet as claimed in claim 1. The subject-matter of these claims thus also involves an inventive step. Accordingly, the patent can be maintained in this form.

## 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 on the basis of
   (a) Claims 1 to 3 according to the auxiliary request 1 filed during the oral proceedings.
   (b) The amended description pages numbered 2 to 6 filed during the oral proceedings.
   (c) Figures 1 to 3 as granted.

The Registrar | The Chairman

M. Patin | P. Alting van Geusau