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**Datasheet for the decision  
of 23 February 2017**

**Case Number:** T 2096/12 - 3.2.06

**Application Number:** 02256177.3

**Publication Number:** 1290995

**IPC:** A61F13/512, A61F13/537

**Language of the proceedings:** EN

**Title of invention:**

Absorbent article

**Patent Proprietor:**

Unicharm Corporation

**Opponent:**

THE PROCTER & GAMBLE COMPANY

**Headword:**

**Relevant legal provisions:**

EPC Art. 100(b), 83  
RPBA Art. 13(1)

**Keyword:**

Sufficiency of disclosure - main request (no)  
Late-filed request - admitted (no)

**Decisions cited:**

T 0575/05, T 0593/09, T 1414/08, T 0815/07, T 2387/09,  
T 0590/05

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 2096/12 - 3.2.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.06**  
**of 23 February 2017**

**Appellant:** Unicharm Corporation  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 7 August 2012  
revoking European patent No. 1290995 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman** W. Ungler  
**Members:** G. de Crignis  
M. Hannam

### **Summary of Facts and Submissions**

- I. European patent No. 1 290 995 was revoked by the opposition division by way of its decision posted on 7 August 2012.
- II. The opposition division held that the ground of opposition under Article 100(b) EPC was prejudicial to maintenance of the patent.
- III. The patent proprietor (appellant) filed an appeal against this decision and paid the appeal fee.
- IV. A statement setting out the grounds of appeal was received at the European Patent Office. The appellant cited a variety of T- and G-decisions and requested that the decision of the opposition division be set aside and the patent be maintained as granted (main request), requested as its first auxiliary request that three questions be referred to the Enlarged Board of Appeal, or that the patent be maintained in amended form on the basis of one of auxiliary requests 2 to 13. Furthermore, the appellant requested that the case be remitted to the department of first instance if the objection under Article 100(b) EPC was found to be overcome.
- V. In its communication annexed to the summons to oral proceedings, the Board indicated its provisional opinion that neither the main request nor one of the auxiliary requests appeared to be allowable and that the questions formulated for referral to the Enlarged Board did not meet the requirements of Article 112 EPC.
- VI. In reply, the appellant cited and submitted further T-decisions and referred to EP-A-2 011 460. It further

filed auxiliary requests 1a, 1b and 1c and maintained its previously filed auxiliary requests.

- VII. Oral proceedings were held before the Board on 23 February 2017, during which the appellant withdrew auxiliary requests 1, 1a, 1b and 2 to 13. The appellant requested that the decision under appeal be set aside and the patent be maintained as granted (main request), or that the patent be maintained in amended form on the basis of auxiliary request 1c filed with letter dated 23 January 2017. The respondent requested that the appeal be dismissed.

- VIII. Claim 1 of the main request reads as follows:

"An absorbent article (10) elongated to have longitudinally opposed front and rear edges (13, 14) and transversely opposed left and right edges (11, 12), the absorbent article comprising a stack of:  
a backsheet (21) having a liquid barrier effect;  
a liquid absorbent layer (22);  
a hydrophilic intermediate sheet (23) including fibers;  
and  
a hydrophilic topsheet (24) including fibers,  
wherein the absorbent article has a central region (30) of a predetermined width (W5), which is spaced apart from the left and right edges and formed with a plurality of liquid passage holes (31) continuously extending from the topsheet to the intermediate sheet, characterised in that the absorbent article has a thickness equal to or smaller than 3mm, and  
a fiber density of the intermediate sheet is higher than a fiber density of the topsheet in the central region."

Claim 1 of auxiliary request 1c differs from claim 1 of the main request in that the wording "absorbent article" is replaced by "panty liner" and in that the feature of the thickness "equal to or smaller than 3mm" is replaced by "equal to or smaller than 2mm".

IX. The appellant's arguments relevant to the decision can be summarised essentially as follows:

The parameter "thickness", whilst held to be ill-defined, could not reasonably be held to be so ill-defined that the skilled person would not be able, on the basis of the disclosure as a whole and using his common general knowledge, to identify without undue burden the technical measures necessary to solve the problem underlying the patent at issue.

The claimed thin absorbent articles were structurally well defined and were not highly compressible. The thickness feature acted simply to identify this class of absorbent articles. Hence, the thickness feature was not essential for carrying out the invention, this also being clear from the object of the invention which was to provide rapid diffusion over a large area. Even in consideration of the top layer having a fuzzy appearance, consistent results could be obtained since optical measurements taken from photomicrography were clear and repeatable and the full uncompressed thickness of the article should be considered. Additionally, it had not been shown that different pressures would provide thickness measurement results differing to any appreciable degree.

A number of decisions stated that the question of whether one was working within the forbidden area of the claims would be a question of clarity (Article 84

EPC) and not a question of sufficiency (Article 83 EPC). In the present case, any ambiguity held to arise from the thickness parameter could not be said to affect the whole scope of the claim which would be required for the parameter to be considered under sufficiency. T 1414/08 for example held that an ambiguity of end values of a claimed range was a matter of definition under Article 84 EPC - this applied here as well. T 593/09 stated in the headnote that an ill-defined parameter in a claim would not be a reason to deny sufficiency of disclosure. This approach was applicable here. T 575/05 and T 815/07 did not contradict these approaches.

Auxiliary request 1c should be admitted. In its claim 1, the thickness of the absorbent article was claimed to be equal to or smaller than 2 mm. The measurement of this thickness would be even more independent of any pressure applied. The absorbent article was limited to panty liners and the skilled person knew how to make such articles.

X. The respondent's arguments relevant to the decision can be summarised essentially as follows:

The requirements of Article 100(b) EPC were not met, since no test method was described in the patent indicating how to measure the article thickness. This was essential for carrying out the invention, because the materials of the absorbent article included compressible materials such as air-laid fluff pulp for the absorbent layer and such as synthetic fibres for the intermediate sheet and the topsheet. Depending on the pressure applied, the result would vary significantly and this affected not only the fringes of the range but rather the whole scope of the claim.

There were various methods used in the technical field for the determination of thickness which used vastly different pressures.

An optical measurement without applying pressure was not applicable in that the fibrous topsheet did not present a clear and defined top surface of the article. Additionally, there could be variations of the thickness across the area of the article.

The fact that a completely ambiguous parameter could lead to an objection with regard to sufficiency was in line with the cited T-decisions.

The same arguments applied equally to auxiliary request 1c. Accordingly, the raised objection was not overcome which would be a necessity for admittance of the request which was filed only in reply to the communication of the Board. Hence, auxiliary request 1c should not be admitted.

## **Reasons for the Decision**

1. *Main Request - Sufficiency of disclosure*
  - 1.1 Claim 1 defines a thickness range of "equal to or smaller than 3 mm" without any test method being stated regarding the way in which the thickness parameter is measured. The lack of a disclosed method in the patent itself is undisputed.
  - 1.2 Materials which may be used to form the absorbent article in claim 1 include compressible materials, such



as air-laid pulp in the absorbent layer (paragraphs 9, 57 of the patent), and such as through-air bonded nonwoven fabrics in the topsheet and in the two-layered intermediate sheet (paragraphs 46, 48, 50).

- 1.3 The pressure used in a test method for measuring thickness of compressible products is of utmost importance because the thickness varies inversely with the pressure applied. If the pressure used in the measurement method is unknown, the skilled person is unable to determine whether the article is within or without the scope of claim 1. Thus, while the Board acknowledges that some degree of measurement value variation will occur and is to be included within a claimed range, the complete lack of information as to what load is to be applied when measuring a compressible sheet leads to a degree of uncertainty in thickness measurement of the claimed article which is entirely unacceptable for a skilled person trying to establish which articles might fall within the claims.
- 1.4 The appellant has argued that thickness should be determined using an optical measurement of the article in an uncompressed state, for which no pressure needs to be applied.
  - 1.4.1 An optical determination of thickness without the application of pressure could be considered applicable for articles which have defined surfaces in the sense of the surfaces being smooth and even. This, however, is not the case here. The topsheet of the claimed article is defined in claim 1 as including fibers; and in the description, through-air bonded nonwoven fabrics are disclosed for the topsheet which fabrics can comprise 100% of synthetic sheath/core type bicomponent (polyethylene terephthalate or polypropylene/

polyethylene) fibers (paragraphs 45, 46). These fibers extend to an undefined and irregular degree out of the surface. Additionally, liquid passage holes are disclosed such as to extend continuously from the topsheet to the underlying intermediate sheet and thus provide openings which further contribute to an uneven surface. Accordingly, there is not provided an even, smooth surface which would allow the skilled person to apply an optical measurement.

1.4.2 Additionally, the design of the claimed article is set up as an arrangement of layers without indicating their extension across the width and length of the article. Accordingly, variations of the thickness across the area of the article are included and there is no information concerning the position on the article where the claimed thickness should apply, or even whether an average of the thickness of the article should be established.

1.5 The appellant has further argued that, when applying a method involving the use of pressure, the results would not vary significantly dependent upon the chosen method of measurement (and applied pressure) since the articles were very thin and not significantly compressible.

1.5.1 No evidence therefore has been provided.

1.5.2 Moreover, inconsistent with this argument, highly compressible materials are disclosed for the layers of the claimed absorbent article:

(a) for the absorbent layer, any absorbent material is defined as being possible and air-laid pulp is mentioned as an exemplary material (paragraph 57),

(b) for the topsheet and the intermediate layer, through-air bonded nonwoven fabrics having low mean fiber densities are disclosed (0.03 - 0.11 g/cm<sup>3</sup>, paragraphs 45, 48) which are certainly highly compressible.

The use of such highly compressible materials is also reasonable and to be expected in view of the function and the comfort they shall provide. As a consequence, it can only be concluded that the results of a thickness measurement will differ significantly dependent on the pressure applied.

1.5.3 For the related argument, that the available determination methods (DIN; ISO; ASTM; JIS; ...) would apply only slightly varying and quite small amounts of pressure and that this would not lead to significant variation in the results, no evidence for this has been provided.

1.5.4 In fact, this argument is neither correct nor credible in view of the applied pressures varying significantly between the available determination methods, for example:

0.5 kPa (DIN EN ISO 9073-2) (cited in T 575/05);  
0,69 kPa (EP-A-2 011 460) (filed by the appellant);  
up to 1 kPa (EN ISO 5084 1996) (cited in T 575/05);  
4.14 kPa (ASTM D 5729-97) (cited in T 575/05).

1.6 The appellant further submitted that the skilled person could easily produce the claimed article in that these articles were well-known.

1.6.1 Whilst, theoretically and generally, it may be correct that a product which fulfils the thickness parameter feature of a claim can be produced, this does not release the proprietor from its burden of providing

sufficient disclosure in the patent itself to allow the skilled person to carry out the invention at least with reasonable certainty.

1.6.2 Accordingly, when defining a range for the parameter "thickness" as a feature of a claim, and the article being compressible and having an uneven surface, the provision of Article 83 EPC that the invention shall be disclosed "in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art" has to be met also in relation to this feature.

1.7 The appellant's argument that Article 100(b) EPC was not at issue here, but instead that the issue related merely to whether the boundaries of the product could be exactly determined or not (Article 84 EPC), was not supported by any evidence.

1.7.1 The range claimed for the thickness is clear. The issue here is whether this clear range is sufficiently disclosed and can reasonably be established; the issue is not whether the edges of the range are somehow "unclear". Accordingly, the issue differs for example from the issue which was concerned in T 1414/08 which held that an ambiguity of end values of a claimed range was a matter of definition under Article 84 EPC.

1.7.2 The argument that this feature would lie at the edge of the claim, acting simply to identify the relevant class of absorbent article (i.e. a "thin" absorbent article") cannot be accepted either. According to Rule 43 EPC, the claims shall define the matter for which protection is sought in terms of the technical features of the invention. Here the range for the thickness was included as a feature in the characterising portion of the claim. According to Rule 43(1)b) EPC, the

characterising portion specifies the technical features for which protection is sought. Hence, this feature cannot be considered as lying "at the edge of the claim" nor can it be considered as "simply identifying the class of article".

1.7.3 The appellant's correlated argument, that the skilled person would be able, on the basis of the disclosure as a whole and using his common general knowledge, to identify without undue burden the technical measures necessary to solve the problem underlying the patent at issue, lacks support in the patent in suit. This argument was submitted in relation to the problem cited in paragraph 11 of the patent in suit. According to this paragraph, the problem being addressed by the invention was "the provision of a thin absorbent article in which a minute amount of liquid locally applied in a concentrated manner can be rapidly diffused over a large area for absorption and retention to substantially increase an absorption capacity of the liquid, thereby making it possible to wear the absorbent article for a long time". Therefore, according to the appellant's view the problem to be solved was not linked to the claimed range of thickness, this range only identifying the class of articles and being unrelated to the crucial issue of the invention. However, with respect to the problem referred to in paragraph 11 of the patent in suit, there is no feature whatsoever in claim 1 which would solve this problem: there is no feature linked to a "minute" (or some specific) amount of liquid application, nor is there a requirement linked to a time scale or to an area for absorption and retention.

1.7.4 The current issue thus is not related to the question of whether the claimed range somehow corresponds to a

problem to be solved set out in the patent in suit. The appellant's argument that the thickness of the article was not related to the object set out in the patent in suit is, in this case, irrelevant. The reference to T 815/07 by the appellant in this regard is beside the point at issue since the head note therein relates to the case of a determination method being specified *expressis verbis* in the patent (and in the claim) and in particular to the issue of whether this method produced consistent values, so that the skilled person would know, when carrying out the invention, whether what he produces will solve the problem or not. So, it was a question of significance, consistency and reliability of results obtained by the claimed and disclosed method (which was denied).

1.7.5 On the contrary, in the case at issue, there is no method at all specified in either the description or the claims for determining the claimed range. Accordingly, the validity of the claimed range in relation to significance, consistency and reliability of specific results cannot be established at all. Furthermore, the skilled person would not consider the thickness range to be linked to the problem set out in the patent in suit but would realize that this range, set out in the characterising portion as a technical feature of the invention, has to be met by the claimed article independent of the stated problem.

1.8 Summarising, a skilled person cannot know, from the disclosure in the patent, which measurement method should be employed to establish the claimed thickness parameter. The burden on the skilled person in trying to carry out the invention as claimed based on the content of the patent as granted is therefore undue, since the skilled person is unable, with any reasonable

degree of certainty, to know when an article would lie within the scope of the claim, since without the disclosure of a test method for the thickness measurement, the claimed parameter range has no sufficiently defined technical meaning within the technical field concerned. The ground for opposition under Article 100(b) EPC thus prejudices the maintenance of the patent. The main request is thus not allowable.

1.9 The citation of a variety of T-decisions in order to demonstrate that the invention of claim 1 was sufficiently disclosed, does not serve this purpose. When considering the issues in the cases underlying these decisions, the Board concludes that there is no discrepancy between the conclusions in those decisions and that reached here.

1.9.1 T 593/09 was cited as being the current leading decision. In this decision, sufficiency was denied in relation to the feature of claim 1 concerning a range for an LTC (low temperature crystallisation) temperature of "130 to 165°C". No information was disclosed in the specification with regard to the heating rate to be applied during the heating step for the determination of the LTC temperature. Depending on the heating rate applied in the determination method, the LTC temperature could vary by more than 21°C for one and the same material (for a range of 35°C). The absence of information concerning which heating rate to apply amounted to an undue burden on the skilled person wishing to carry out the invention. Apart from this finding, comments were made regarding the relationship of Articles 83 EPC and 84 EPC. It was referred to a "distinction between clarity of what has been disclosed and clarity of what is claimed". Concerning an ill-

defined parameter, it was stated that the conclusion of there being insufficient disclosure (concerning Article 83 EPC) whenever the scope of the claims is unclear would not be applicable (point 4.1.4). The current Board agrees that the issue of sufficiency has to be established on a case by case basis. In view of no test method being disclosed in the whole specification of the current patent in suit, even when accepting that it is clear "what is claimed" (a range for thickness), the issue of lack of disclosure for "what has been disclosed" leads to the conclusion that there is an insufficient disclosure for determining the range of thickness for the claimed article.

- 1.9.2 The further statement in T 593/09 that "It will be necessary to show that the ambiguity deprives the person skilled in the art of the promise of the invention (with reference to T 608/07)" is applicable in the current case as well. In the absence of a referenced method, the degree of ambiguity is significant, in that the range for the thickness cannot be established reliably and reproducibly.
- 1.9.3 The Board agrees with the statements in T 593/09 and emphasizes that the absence of a test method for a parameter which is a claimed feature does not lead by itself to the issue of insufficient disclosure. In a case where - for example ranges for length or width of a clearly structured article are concerned - the parameters could be established unambiguously and without doubt. However, in each case it has to be evaluated on a case by case basis whether this is possible. According to Article 69 EPC, the extent of protection conferred by a patent shall be determined by the claims and the description and drawings shall be used to interpret the claims. When - such as in the



case at issue where neither the claims nor the description provide a clue for how to interpret the parametrical feature of the claim - the extent of the protection conferred by the patent is not defined and cannot be reliably determined, it can only be concluded that the requirement of Article 100 (b) EPC is not met.

- 1.9.4 The conclusion in the current case is equally consistent with T 575/05 which held that in a case of no measurement method being disclosed for the determination of the thickness of an absorbent sheet, the request was not allowable for lack of sufficient disclosure. The range to be considered therein was 0.3mm to 5mm and thus overlaps to a significant degree with the range to be considered here.
- 1.9.5 An equivalent conclusion applies with regard to T 2387/09 wherein thickness as well as density of an absorbent article were to be considered.
- 1.9.6 A range for the thickness of a napkin was also claimed in the case underlying T 590/05. However, the objection raised under Article 100(b) EPC in this case concerned a test method with regard to the claimed ratio of wicking capability. A test method for this parameter was included into claim 1 and thus sufficiency was considered to be present. The feature concerning the thickness of the absorbent article (which was also present) was not objected to by any party and was thus not at issue in the proceedings. Consequently this case is of no relevance with regard to the current proceedings.
- 1.10 The further T-decisions cited in the written proceedings were not related to the determination of thickness/density in absorbent articles and thus could

not contribute further to the issue here. They were also not relied upon further during the oral proceedings.

2. *Auxiliary request 1c - admittance*

2.1 According to Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA), it lies within the discretion of the Board to admit any amendment to a party's case after it has filed its grounds of appeal or reply. In order to be admitted at such a stage of proceedings, a request should normally be clearly allowable at least in the sense that it overcomes the objections raised and does not give rise to new objections.

2.2 In claim 1 the wording "absorbent article" present in claim 1 of the main request is replaced by the wording "panty liner" and the feature of the thickness being "equal to or smaller than 3mm" present in claim 1 of the main request is replaced by "equal to or smaller than 2mm".

2.3 These amendments do not change the underlying arguments set out above with respect to the main request. The appellant's argument that the measurement of this thickness would be even more independent of the pressure applied and therefore only the fringes of the range would be concerned was again not supported by any evidence and in view of the same compressible materials being affected, the conclusion reached for the main request still applied.

2.4 Hence, the Board concluded that these amendments do not lead to the objection with regard to lack of sufficient disclosure being overcome. Accordingly, the Board

exercised its discretion under Article 13(1) RPBA not to admit the request into the proceedings.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



M. H. A. Patin

W. Ungler

Decision electronically authenticated