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**Datasheet for the decision
of 20 May 2021**

Case Number: T 0690/17 - 3.2.06

Application Number: 10758782.6

Publication Number: 2415435

IPC: A61F13/15, A61F13/472,
A61F13/53, A61F13/539

Language of the proceedings: EN

Title of invention:

ABSORBENT ARTICLE AND METHOD FOR PRODUCING ABSORBENT ARTICLE

Patent Proprietor:

Unicharm Corporation

Opponent:

The Procter & Gamble Company

Headword:

Relevant legal provisions:

EPC Art. 84

RPBA 2020 Art. 13(1), 13(2)

Keyword:

Claims - clarity (no)

Late-filed auxiliary requests 4 and 5 - admitted (no)

Late-filed request - circumstances of appeal case justify
admittance (no)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 0690/17 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 20 May 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
16 February 2017 concerning maintenance of the
European Patent No. 2415435 in amended form.**

Composition of the Board:

Chairman M. Harrison
Members: M. Hannam
J. Hoppe

Summary of Facts and Submissions

- I. An appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division in which it found that European patent No. 2 415 435 in an amended form met the requirements of the EPC.
- II. The appellant requested that the decision under appeal be set aside and the patent be revoked.
- III. The respondent (patent proprietor) requested with its reply that the appeal be dismissed or, in the alternative, that the patent be maintained in amended form according to one of auxiliary requests 1 to 3.
- IV. The following document is relevant to the present decision:

D4 US-B1-6 459 016
- V. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that claim 1 of the main request appeared to lack clarity (Article 84 EPC). It also indicated that claim 1 of auxiliary requests 1 to 3 appeared not to overcome the clarity objection and that claim 1 of auxiliary requests 1 and 3 seemingly contained subject-matter extending beyond the content of the application as filed (Article 123(2) EPC).
- VI. With letter of 15 March 2021 the respondent submitted further arguments in support of the clarity of the claims in the requests on file and filed further

auxiliary requests 4 and 5.

VII. Oral proceedings by videoconference were held before the Board on 20 May 2021. At the end of the proceedings, the requests of the parties were as follows:

The appellant requested that the decision under appeal be set aside and the European patent be revoked.

The respondent requested that the appeal be dismissed (main request), or as an auxiliary measure that the patent be maintained in amended form based on one of auxiliary requests 1 to 3, filed with the reply to the appeal, or based on one of auxiliary requests 4 or 5, filed with letter dated 15 March 2021.

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

"An absorbent article comprising a liquid-permeable topsheet (10), a liquid-impermeable backsheet (20), and an absorber (40) provided in between the topsheet (10) and the backsheet (20), such that a joint unit (70) is formed in which at least the topsheet (10) and the absorber (40) are joined, wherein the absorber (40) comprises:

a first region (41) having a predetermined weight per unit area of an absorbent material configuring the absorber (40); and

a second region (42) having less weight per unit area of the absorbent material than the first region (41), the second region (42) extending along the longitudinal direction of the absorbent article, characterized in that

the second region (42) is sandwiched between first regions (41) in the widthwise direction of the

absorbent article, and the joint unit (70) is formed in the second region (42);
the joint unit (70) is formed by adding pressure in the thickness direction (T) of the absorbent article to at least the topsheet (10) and the absorber (40) so as to join the topsheet (10) and the absorber (40); and
a width (W1) orthogonal to the extending direction of the second region (42) is broader than a width (W2) orthogonal to the extending direction of the joint unit (70)."

Claim 1 of auxiliary request 1 reads as for the preamble of claim 1 of the main request, the characterising portion reading as follows:

"characterized in that the second region (42) is sandwiched between first regions (41) in the widthwise direction of the absorbent article,
the second region (42) possesses a first low basis weight region (421) and a second low basis weight region (422),
the joint unit (70) is formed in the second region (42), specifically the joint unit (70) is formed in the first low basis weight region (421) by the application of pressure in the thickness direction (T) of the absorbent article to at least the topsheet (10) and the absorber (40) so as to join the topsheet (10) and the absorber (40), and
a width (W1) orthogonal to the extending direction of the second region (42) is broader than a width (W2) orthogonal to the extending direction of the joint unit (70), such that
 $X > Z > Y$ is satisfied, where
'Z' is taken as the density (mass per unit volume (g/cm^3)) of the first region (41),
'X' is taken as the density of the first low basis

weight region (421), and
'Y' is taken as the density of the second low basis
weight region (422)."

Claim 1 of auxiliary request 2 reads as for the
preamble of claim 1 of the main request, the
characterising portion reading as follows:

"characterized in that the second region (42) is
sandwiched between first regions (41) in the widthwise
direction of the absorbent article, and the joint unit
(70) is formed in the second region (42);
the joint unit (70) is formed by subjecting at least
the topsheet (10) and the absorber (40) to embossing in
the thickness direction (T) of the absorbent article so
as to join the topsheet (10) and the absorber (40), and
a width (W1) orthogonal to the extending direction of
the second region (42) is broader than a width (W2)
orthogonal to the extending direction of the joint unit
(70)."

Claim 1 of auxiliary request 3 reads as for the
preamble of claim 1 of the main request, the
characterising portion reading as follows:

"characterized in that the second region (42) is
sandwiched between first regions (41) in the widthwise
direction of the absorbent article,
the second region (42) possesses a first low basis
weight region (421) and a second low basis weight
region (422),
the joint unit (70) is formed in the second region
(42), specifically the joint unit (70) is formed in the
first low basis weight region (421) by subjecting at
least the topsheet (10) and the absorber (40) to
embossing in the thickness direction (T) of the

absorbent article so as to join the topsheet (10) and the absorber (40), and a width (W1) orthogonal to the extending direction of the second region (42) is broader than a width (W2) orthogonal to the extending direction of the joint unit (70), such that $X > Z > Y$ is satisfied, where 'Z' is taken as the density (mass per unit volume (g/cm^3)) of the first region (41), 'X' is taken as the density of the first low basis weight region (421), and 'Y' is taken as the density of the second low basis weight region (422)."

Claim 1 of auxiliary request 4 reads as for claim 1 of auxiliary request 1 with the following features appended:

"and wherein the joint unit (70) is in a longitudinally elongated ring shape along the longitudinal direction L of the absorbent article (1) and, in the plan view of the absorbent article (1), the joint unit (70) is configured by a large ring unit (70A) creating the largest ring shape, a medium ring unit (70B) creating a ring shape smaller than that of the large ring unit (70A) in the region surrounded by the large ring unit (70A) and a small ring unit (70C) creating a ring shape smaller than that of the medium ring unit (70B) in the region surrounded by the medium ring unit (70B)."

Claim 1 of auxiliary request 5 reads as for claim 1 of auxiliary request 3 with the following features appended:

"and wherein the joint unit (70) is in a longitudinally elongated ring shape along the longitudinal direction L

of the absorbent article (1) and, in the plan view of the absorbent article (1), the joint unit (70) is configured by a large ring unit (70A) creating the largest ring shape, a medium ring unit (70B) creating a ring shape smaller than that of the large ring unit (70A) in the region surrounded by the large ring unit (70A) and a small ring unit (70C) creating a ring shape smaller than that of the medium ring unit (70B) in the region surrounded by the medium ring unit (70B)."

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

Claim 1 of the main request lacked clarity. The sole example of applying pressure to form the joint unit in the patent was embossing yet adhesive bonding and heat/fusion bonding also required pressure to be applied, and additionally needed the application of adhesive or heat to create the join. Claim 1 was thus unclear as to whether the application of pressure alone achieved the bond in the joint unit. Even the materials indicated as examples for the topsheet and absorber in the patent would not necessarily show the reduction in thickness or increase in density as a result of a pressure application step as alleged by the proprietor; polyethylene film was elastic and high-water absorbent polymer (SAP) was not compressible.

Claim 1 of auxiliary request 1 also lacked clarity. The introduction of the density relationships to claim 1 failed to overcome the objection that the process step of the joint unit being formed by application of pressure would be unrecognisable in an article manufactured of elastic materials (e.g. polyethylene film) or incompressible materials (e.g. SAP).

The same objection still held for claim 1 of auxiliary request 2. Even a joint unit formed by embossing would not result in an identifiable feature of the claimed article across the full scope of claim 1, particularly when elastic or incompressible materials of construction were used. Any different density present in an article, was not necessarily attributable to embossing.

Claim 1 of auxiliary request 3 lacked clarity for the same reasons as claim 1 of auxiliary requests 2 and 3.

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

Claim 1 of the main request met the clarity requirement of Article 84 EPC. The joint unit being formed by adding pressure in claim 1 was the sole necessary feature to clearly define the joint unit. The type of joint unit formed by adding pressure was very well-known and could easily be recognised in the claimed article through an increase in density of both the topsheet and the absorber in the region of the joint unit as well as a decrease in thickness of the topsheet and absorber compared to the regions adjacent to the joint unit. The thickness of the topsheet and absorber could be seen either visually or by using a microscope; conventional methods would allow the density of the components to be ascertained. In a typical manufacturing process, the soft and compressible topsheet and absorber components would show clear thickness reduction and density increase in the area of the joint unit where heavy machinery components were used to apply pressure. In general, absorber and topsheet material elasticity was very low e.g. paragraph [0016] of the patent which disclosed 'air-

through non-woven fabric' for the topsheet and paragraph [0019] which disclosed ground pulp for the absorber. Joining by adding pressure was also a functional feature which would result in a change of thickness and density and could not be defined in another way without being overly restrictive for the claim scope. If high elasticity materials were used for the topsheet and absorber, the thickness and density changes would not be observable and such an article would be outside the scope of the claim.

Claim 1 of auxiliary request 1 met Article 84 EPC. The limitation to the density relationships of the regions clearly defined how the application of pressure affected physical features of the claimed article. Table 1 of the patent explained this in more detail. Even if the topsheet and absorber were made of elastic materials, the increase in density and decrease in thickness would be observable in the claimed article.

Claim 1 of auxiliary request 2 limited the application of pressure to embossing, typically requiring the application of high pressures, which would be clearly identifiable in the resultant article, irrespective of the materials of construction.

Claim 1 of auxiliary request 3 included a combination of the amendments made to claim 1 of auxiliary requests 1 and 2 over claim 1 of the main request. For the reasons forwarded for auxiliary requests 1 and 2, claim 1 of auxiliary request 3 was therefore also clear.

Auxiliary requests 4 and 5 were not directed to overcome the clarity objections to the higher ranking requests. However, with the fundamental importance of the type of material used in the topsheet and the

absorber only having become evident at oral proceedings, an interruption should be granted to allow a further auxiliary request to be prepared. The sequence of events in this case was an exceptional circumstance justifying a new request to be taken into account by the Board. Despite the appellant's grounds of appeal having raised an objection of lack of clarity in claim 1 of the main request, this was not due to the joint unit being defined by a process step; this was first raised by the Board in its preliminary opinion. This had been addressed by indicating a reduced thickness and increased density which would be observable in the claimed article. Only at oral proceedings had the importance of the type of material become apparent such that an opportunity should be given to overcome this hitherto unknown objection.

Reasons for the Decision

Main request

1. *Clarity, Article 84 EPC*

The following feature of claim 1 lacks clarity:

"the joint unit is formed by adding pressure in the thickness direction of the absorbent article to at least the topsheet and the absorber so as to join the topsheet and the absorber".

The structural characteristics of a joint formed by the method step of 'adding pressure' cannot be clearly identified in an article according to claim 1.

- 1.1 Claim 1 is directed to an absorbent article, yet the above referenced feature is a process step (the joint unit 'is formed by adding pressure') which would not be recognisable in the claimed article. The respondent's argument that the claimed 'joint unit is formed by adding pressure' was a functional feature of the article is not accepted. According to the claim, the application of pressure directly forms the joint unit, a physical feature of the article, and has no function beyond this. Even if the alleged decrease in thickness and increase in density of the topsheet and absorber could necessarily be attributed to the method step, these would anyway be physical features of the finished article and thus do not allow the process step of adding pressure to form the joint unit to be recognised as a 'functional feature' of the claimed absorbent article.

- 1.2 The respondent's argument that the joint unit being formed by adding pressure would be easily recognised in the claimed article through an increase in density and a decrease in thickness of the topsheet and absorber compared to the regions adjacent to the joint unit is not accepted, as explained below.
 - 1.2.1 Firstly, it will not necessarily be the case that any increased density and decreased thickness of the topsheet and absorber will be due to pressure having been added to form the joint unit. Other manufacturing steps could also result in these parameter changes, as in D4 for example, where densified channels 50 are formed, the body-facing layer 72 following the shape of the densified channels to line the inner edges of the channels 50 (see D4, Fig. 7 and col. 10, lines 33 to 45). Here the increased density and decreased thickness of at least the absorbent element would not be due to

the 'adding of pressure to at least the topsheet and the absorber'.

1.2.2 Secondly, the alleged increase in density and decrease in thickness of the topsheet and absorber allowing the application of pressure to be recognised in the claimed article would anyway not be observable in articles across the scope of claim 1, since claim 1 is not limited to any specific materials of the topsheet or absorber. Elastic materials, for example, would not maintain a reduced thickness or increased density when the application of pressure is removed, at least not unless further specific conditions were observed. Conversely, the thickness and density of incompressible materials, such as SAP, would be unaffected by the application of pressure. As a result, when the claimed absorbent article has a topsheet or absorber of elastic or incompressible material, the joint unit having been formed by adding pressure will not be recognisable in the article. The respondent's reference to paragraphs [0016] and [0019] of the patent to show that normally non-elastic materials could be used for the topsheet and absorber does not change this conclusion as the claim is not limited to these materials which are merely disclosed in an exemplary embodiment of the invention.

1.3 The respondent's allegation that if high elasticity materials were used for the topsheet and absorber, the thickness and density changes would not be observable and such an article would then be outside the scope of the claim does not affect the Board's conclusion on lack of clarity. This example simply highlights how observation of the article would fail to allow an unambiguous conclusion to be drawn that the joint unit had been formed by adding pressure. The failure of an

article to display a reduced thickness and increased density of the topsheet and absorber at the joint unit may be due to the materials being elastic or even incompressible and thus certainly do not result in the article therefore being outside the scope of claim 1. In other words, the lack of any such characteristics in the article does not allow the conclusion to be reached that the joint unit was not formed by adding pressure. Conversely, the article displaying a reduced thickness and increased density of the topsheet and absorber at the joint unit is not unambiguously due to the application of pressure to the topsheet and absorber as outlined in point 1.2.1 above. The alleged increase in density and decrease in thickness of the topsheet and absorber thus do not unambiguously allow the conclusion to be drawn, when considering the article's structural features, that the joint unit was formed by adding pressure, nor does it allow the converse to be concluded that an article failing to display these parameter changes is outside the scope of the claim.

- 1.4 The respondent's argument that the claimed joint unit was a well known product feature which the skilled person would therefore not see as being unclear does not affect the foregoing conclusion. It can be accepted that a joint unit displaying a reduced topsheet and absorber thickness and an increased topsheet and absorber density may, under specific conditions of materials of construction, be produced by adding pressure in the thickness direction of the absorbent article. However, this is not the only way in which such physical features at a joint unit could result. For example, as disclosed in D4 and referred to in point 1.2.1 above, an increased density and decreased thickness of at least an absorbent element would not necessarily be due to the 'adding of pressure to at

least the topsheet and the absorber'. Indeed, this was also argued by the appellant with regard to the inclusion of adhesive in such a joint, which would not necessarily then be formed by adding pressure and, even where pressure was applied, not in any way which was necessarily structurally evident. Defining the joint unit with the process step of adding pressure in the thickness direction of the absorbent article therefore fails to unambiguously define the joint unit in the claimed absorbent article.

- 1.5 The Board therefore finds that, across the scope of claim 1, it would not be possible to ascertain that the method step of the joint unit being formed by application of pressure resulted in a clearly identifiable structural feature of the absorbent article, such that claim 1 fails to meet the clarity requirement of Article 84 EPC. The main request is therefore not allowable.

Auxiliary request 1

2. *Clarity*

The features added to claim 1 fail to overcome the clarity objection to claim 1 of the main request.

- 2.1 The respondent's contention that the limitation in claim 1 to the density relationships of the regions clearly defined how the application of pressure affected physical features of the claimed article is not accepted. No such unambiguous link between the application of pressure to form the joint unit and the density relationships is present in claim 1. As indicated *inter alia* in point 1.2.1 above, alternative manufacturing processes to the application of pressure

could equally result in increased density, and the resultant density relationships, of the article in the region of the joint unit.

2.2 The introduction of the density relationships also fails to limit the scope of claim 1 to exclude elastic or incompressible materials, which would not display the increase in densities when pressure is added, but which may anyway give rise to the density relationships of the claim depending for example on how the absorber was manufactured. The claimed article thus still does not allow the process step of forming the joint unit by application of pressure to be identified in the claimed article. The respondent's argument that when pressure is applied even elastic materials would display some degree of density increase is not accepted. In the absence of plastic deformation, which would not necessarily occur through application in claim 1 of an unquantified 'pressure', an elastic material would recover its original volume after application of pressure thus not enabling any increase in density to be measured in the claimed article (even assuming, to the respondent's advantage, that the material was homogenous prior to the application of pressure).

2.3 It thus follows that claim 1 lacks clarity, as the method step of the joint unit being formed by the application of pressure does not result in a clearly identifiable structural feature of the absorbent article. Auxiliary request 1 is thus not allowable.

Auxiliary request 2

3. *Clarity*

The amendments introduced to claim 1 do not result in a

claim which is clear, contrary to the clarity requirements of Article 84 EPC.

- 3.1 Even though claim 1 was limited to the application of pressure specifically by embossing which, as the respondent argued, would typically require the application of high pressures, this was still a process step which would not be clearly identifiable as a structural feature in the claimed article.
- 3.2 This would particularly be the case for elastic or incompressible topsheets and absorbers which would, as a direct result of their elasticity or incompressibility, not display a reduced thickness or increased density in the finished article. The scope of claim 1 is notably not limited to inelastic or compressible components. Moreover, even if high pressures were applied and resulted in a more highly compressed absorber or topsheet, this cannot resolve the fact that such structural features may have been created differently (e.g. in a previous step which, in particular, did not involving pressure being used to form the joint) as mentioned in item 1.2.1 above.
- 3.3 Claim 1 thus lacks clarity as the method step of the joint unit being formed by subjecting the topsheet and absorber to embossing is not a clearly identifiable structural feature of the absorbent article itself. Auxiliary request 2 is thus not allowable.

Auxiliary request 3

4. *Clarity*

- 4.1 With respect to the clarity objection to claim 1 of auxiliary request 3, the respondent simply referred to

its arguments presented in regard to the clarity of the foregoing requests. At oral proceedings it further refrained from presenting further arguments in this regard.

- 4.2 For the same reasons as presented for auxiliary requests 1 and 2, the Board thus finds claim 1 of auxiliary request 3 to lack clarity contrary to Article 84 EPC. Auxiliary request 3 is thus not allowable.

Auxiliary requests 4 and 5

5. *Admittance, Article 13(1) RPBA 2020*

- 5.1 Having been filed after its complete appeal case, the admittance of auxiliary requests 4 and 5 is at the discretion of the Board under Article 13(1) RPBA 2020. The Board's new objection under Article 123(2) EPC in the communication under Article 15(1) RPBA 2020 might in principle justify the filing of a new request, but a request filed in reaction thereto cannot be admitted if it does not *prima facie* overcome the issues raised by the Board or if it gives rise to new objections. As set out under Article 13(1) RPBA 2020, the Board's discretion shall therefore be exercised *inter alia* in view of the suitability of the amendment to resolve the issues admissibly raised in the appeal proceedings.

- 5.2 Claim 1 of auxiliary request 4 is based on claim 1 of auxiliary request 1, that of auxiliary request 5 on claim 1 of auxiliary request 3. The respective claims have been further modified through the addition of features to overcome an objection under Article 123(2) EPC in the Board's preliminary opinion.

- 5.3 The amendments in auxiliary requests 4 and 5 were not made to address the objection of lack of clarity found prejudicial to claim 1 of auxiliary requests 1 and 3. The respondent also accepted that this was the case. The same findings as made for auxiliary requests 1 and 3 thus apply here too. Claim 1 of auxiliary requests 4 and 5 thus lack clarity and are therefore *prima facie* not allowable at least for this reason.
- 5.4 Failing to resolve the issues of the higher ranking requests, the Board exercised its discretion under Article 13(1) RPBA 2020 not to admit auxiliary requests 4 and 5 into the proceedings.
6. *Taking a (non-formulated) further auxiliary request into account*
- 6.1 After hearing the Board's opinion on auxiliary requests 4 and 5 at oral proceedings, the respondent requested an interruption for preparation of a further request in order to limit the claims to the particular materials disclosed in the patent or to the method in order to address the objection under Article 84 EPC.
- 6.2 According to Article 13(2) RPBA 2020, "Any amendment to a party's appeal case made ... after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned".
- 6.3 The respondent argued that the importance of the type of material used in the topsheet and the absorber had only become evident at oral proceedings, and that this was to be seen as an exceptional circumstance justifying taking into account a further auxiliary

request limiting the claims and that time was needed to prepare a new request. The Board however does not concur. It can be accepted that the clarity objection raised by the appellant in its grounds of appeal related to different joint forming methods and did not state explicitly that the lack of clarity was due to the process step. Nevertheless, the Board had specifically stated this in its communication. In response to this objection the respondent had chosen to argue that a reduced thickness and increased density would be observable in the claimed article as a direct result of the pressure applied to form the joint unit, allegedly making the claim clear. It was this written argument of the respondent that had precipitated the counter arguments from the appellant regarding e.g. elastic materials, included in the scope of claim 1, not displaying the alleged behaviour in the claimed article of decreased thickness and increased density. It had not been necessary, nor indeed was there any motivation, to present this argument prior to the reduced thickness and increased density allegation having been raised by the respondent. The explanation to the respondent that the scope of claim 1 covered materials which did not allow the method step to be clearly identified in structural features of the claimed article can thus only be seen as a normal development of the case rather than as an exceptional circumstance justifying the consideration of a further auxiliary request (indeed, one not even formulated at that stage).

- 6.4 The Board thus found that, in accordance with Article 13(2) RPBA 2020, the respondent had not demonstrated the existence of exceptional circumstances which justified taking into account such an amendment to its appeal case at such a late stage of the proceedings. In

reaction thereto, the respondent refrained both from filing a further request and also from its previous request for an interruption.

7. In the absence of any request which meets the requirements of the EPC, the patent has to be revoked.

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:



D. Grundner

M. Harrison

Decision electronically authenticated