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Datasheet for the decision of 22 July 2025

Case Number: T 0456/23 - 3.2.06

Application Number: 15194752.0

Publication Number: 3167859

IPC: A61F13/532, A61F13/534, A61F13/53

Language of the proceedings: EN

Title of invention:
ABSORBENT CORES HAVING MATERIAL FREE AREAS

Patent Proprietor:
The Procter & Gamble Company

Opponents:
Kimberly-Clark Worldwide, Inc.
Essity Hygiene and Health Aktiebolag

Headword:

Relevant legal provisions:
EPC Art. 56, 100(a)

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

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Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0456/23 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 22 July 2025

Appellant: (Opponent 2)	Kimberly-Clark Worldwide, Inc. 2300 Winchester Road Neenah WI 54956 (US)
Representative:	Dehns 10 Old Bailey London EC4M 7NG (GB)
Appellant: (Opponent 3)	Essity Hygiene and Health Aktiebolag 405 03 Göteborg (SE)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Respondent: (Patent Proprietor)	The Procter & Gamble Company One Procter & Gamble Plaza Cincinnati, OH 45202 (US)
Representative:	Elkington and Fife LLP Prospect House 8 Pembroke Road Sevenoaks, Kent TN13 1XR (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 4 January 2023 rejecting the opposition filed against European patent No. 3167859 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	M. Harrison
Members:	M. Hannam
	K. Kerber-Zubrzycka

Summary of Facts and Submissions

I. An appeal was filed by each of the appellant (opponent II) and the appellant (opponent III) against the decision of the opposition division rejecting the oppositions to European patent No. 3 167 859. They each requested that the decision under appeal be set aside and the patent be revoked.

II. In its reply to the appeals, the respondent (patent proprietor) requested that the appeals be dismissed or, in the alternative, that the patent be maintained according to one of auxiliary requests 1 to 9.

III. The following documents are relevant to the present decision:

D1 US-B2-8 481 159
D3 US-A-2014/0005622

IV. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the subject-matter of claim 1 of the main request appeared to lack an inventive step when starting from D1 and combining the teaching of D3 with this. It further indicated that none of the auxiliary requests seemed to overcome this inventive step objection.

V. Oral proceedings were held before the Board on 22 July 2025, during which the respondent withdrew its auxiliary requests 1 to 9. The requests of the parties at the close of the oral proceedings were thus as follows:

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

The respondent requested that the appeals be dismissed.

VI. Claim 1 of the main request reads as follows (with feature numbering as used by opponent III in its grounds of appeal):

1) An absorbent core (28) for use in an absorbent article comprising:
2) a core wrap (16, 16') enclosing an absorbent material (60),
3) the absorbent material comprising superabsorbent polymer particles and fibrous absorbent material,
4) wherein the superabsorbent polymer particles represent at least 30% by weight based on the total weight of the absorbent material,
5) and the absorbent material comprises more than 30% by weight of the fibrous absorbent material based on the total weight of the absorbent material,
6) wherein the superabsorbent polymer particles and the fibrous absorbent material are mixed with each other,
7) wherein the core wrap comprises a top side (16) and a bottom side (16'),
8) wherein the absorbent core comprises one or more area(s) (26) substantially free of absorbent material, through which the top side of the core wrap is attached to the bottom side of the core wrap, so that when the absorbent materials swells the core wrap forms one or more channel(s) (26') along the area(s) substantially free of absorbent material,
9) characterized in that the superabsorbent polymer particles have a value of absorption against pressure (AAP) of at least 22 g/g according to the Absorption Against Pressure Test Method and

10) a bulk density of at least 0.5 g/ml according to the Bulk Density Test Method.

VII. A consolidation of both the appellants' arguments relevant to the present decision may be summarised as follows:

The subject-matter of claim 1 lacked an inventive step. D1 disclosed all features of claim 11, including feature 10. Col. 2, lines 17 to 24 of D1 was a general disclosure of bulk density, unambiguously applicable to every embodiment. D1 also carried the title 'Water-absorbent porous polymer particles having specific sphericity and high bulk density', such that bulk density was clearly of primary importance and would thus be understood by the skilled person to be present at a high value in every embodiment of the invention.

Starting from Embodiment 4 of D1, if feature 8 were the sole differentiating feature, the objective technical problem to be solved could be seen as 'how to improve fluid transfer and/or fit of the absorbent article'. D3, in for example paragraphs [0116] to [0124], taught that channels in both layers of the absorbent core improved fluid handling. The cited paragraphs would not be understood as disclosing that channels solely promoted fluid penetration in the thickness direction of the core, rather that they promoted fluid transfer away from the point of insult which included flow in a direction along the length of a channel. The claimed subject-matter would thus be reached without exercise of an inventive step.

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

In addition to feature 8 of claim 1, D1 also failed to disclose feature 10. The 'Embodiment 4' disclosed from col. 42, line 60 to col. 44, line 24 of D1 was the basis for the appellants' novelty objection. The disclosure of a bulk density of at least 0.58 g/cm^3 in col. 2, line 20 (i.e. meeting feature 10 of claim 1) was not directly and unambiguously applicable to embodiment 4. This bulk density was indicated to be of 'the present invention', yet such an indication was a vague concept encompassing different aspects of a disclosure, not necessarily referring to every embodiment of D1. This view was further supported by claim 1 of D1 being amended during examination to add the bulk density feature. The relevant paragraph in col. 2 also failed to disclose the claimed AAP (absorption against pressure) parameter which was necessary for the subject-matter of claim 1 to be directly and unambiguously disclosed in D1. The claims of D1 also elucidated that the bulk density and the absorption against pressure were not considered a single disclosure, with the absorption against pressure parameter being absent from claim 1 and being recited only in dependent claims 5 to 7.

If feature 8 were the sole differentiating feature of claim 1 over D1, channels served the purpose of distributing fluid over the area of the absorbent core. The objective technical problem could thus be seen as 'how to improve the fluid distribution in the core'. D3 did not guide the skilled person to the required modification of D1 in order to meet the claimed subject-matter. Paragraph [0117] of D3 disclosed the channels being provided merely in the upper SAP layer of the core to allow fluid to penetrate more quickly through the whole absorbent core i.e. into the bottom mixed layer, thus avoiding gel blocking by the top

layer. It did not guide the skilled person to provide channels for the purpose of improving fluid distribution in the core. Even if the objective technical problem were less ambitiously formulated as 'how to provide altered liquid distribution', D3 would not guide the skilled person to the necessary modification of D1. The disclosure of channels being provided also in the bottom mixed layer in paragraph [0123] of D3 was specifically related to making the channels permanent and so did not provide a general teaching to provide channels in the mixed absorbent material construction of D1 in order to solve the posed problem.

Reasons for the Decision

Main request

1. Article 100(a) EPC in combination with Article 56 EPC

1.1 *Differentiating features*

1.1.1 The respondent concedes that features 1 to 7 and 9 of claim 1 are known from D1. The Board also agrees that this is the case.

1.1.2 The Board, however, finds that the sole differentiating feature of claim 1 over D1 is feature 8 i.e. 'wherein the absorbent core comprises one or more area(s) substantially free of absorbent material, through which the top side of the core wrap is attached to the bottom side of the core wrap, so that when the absorbent materials swells the core wrap forms one or more channel(s) along the area(s) substantially free of

absorbent material'.

1.1.3 As regards feature 10 of claim 1, held by the respondent to also not be known, col. 2, line 20 of D1 explicitly discloses a bulk density of the absorbent material to be at least 0.58 g/cm^3. This is found to be a generally applicable condition for all embodiments of D1, not least due to the disclosure in col. 2, line 17 that absorbent material having this bulk density was according to the 'present invention'.

1.1.4 Regarding the respondent's contention that the bulk density cited in column 2 of D1 and indicated to be of 'the present invention' was not necessarily applicable to every embodiment is not accepted. D1 carries the title 'Water-absorbent porous polymer particles having specific sphericity and high bulk density', such that a specific bulk density cited in the document would necessarily be understood by a skilled person as a value meeting the intention of providing particles with a 'high bulk density'. Col. 2, lines 17 to 24 then indicates that 'the present invention' provides water absorbent polymer particles having a bulk density of at least 0.58 g/cm^3 which provides a minimum value for bulk density that, according to D1, meets the desired 'high bulk density' and anticipates feature 10 of claim 1. On questioning by the Chairman, and in light of the additional disclosure in col. 21, lines 17 to 21, where the lowest value quoted for the polymer particles obtainable by the process according to the invention of D1 was given as preferably at least 0.6 g/cm^3, the respondent was unable to indicate any bulk density value in D1 of less that 0.58 g/cm^3, nor any other parameter value which would imply a lower value of bulk density, further corroborating that this lower limit of bulk density disclosed in D1 would necessarily be

understood by the skilled person to apply to all embodiments. The Board can also see no technical reason for this disclosed bulk density not to apply to each embodiment of the invention.

1.1.5 The respondent's argument that bulk density was clearly not such an important factor in D1 since the feature had not been included in claim 1 of the application as filed does not change the Board's finding that the disclosed bulk density in col. 2, lines 17 to 24 unambiguously applies to every embodiment of the invention. The cited passage of D1 above was notably unchanged from that in the application as filed and, as indicated in point 1.1.4, relates to the 'present invention' such that the skilled person would understand this bulk density as indeed applying to each embodiment. Additionally, as noted by opponent II, wherever bulk density is discussed in D1, it also meets the 'at least 0.5 g/ml' claimed value. Likewise, a particular object of the invention given in col. 1 lines 50 to 52 was to provide a high bulk density which was not only corroborated by the "at least 0.58 g/cm^3" value given in col. 2, line 20 (as indicated above), but was further fully commensurate with col. 2, lines 10 to 15 where it is disclosed that the increased bulk density resulted from the specific conditions of the process of the "present invention", as argued e.g. by opponent II.

1.1.6 The respondent's argument that col. 2, lines 17 to 24 of D1 failed to include the claimed absorption against pressure value such that a direct and unambiguous disclosure of the bulk density could not be extracted from here is not persuasive. The col. 2 reference is, for the reasons given above, understood by a skilled person to be unambiguously applicable to all

embodiments of the disclosure of D1 such that the bulk density disclosed in line 20 is found to be a general teaching which the skilled person would see to be included in each disclosed embodiment of the invention, thus including Embodiment 4. The absorption against pressure parameter being found only in dependent claims 5 to 7 of D1 changes nothing in this regard, each of these claims' absorption under load values covering Embodiment 4 of D1.

1.1.7 In view of all the above, the Board finds D1 to disclose feature 10 of claim 1. The sole feature differentiating claim 1 over D1 is thus feature 8.

1.2 *Inventive step, D1 in combination with the teaching of D3*

1.2.1 Starting from D1 and the differentiating feature 8 of claim 1, the respondent argued the technical problem to be solved to be 'how to improve the fluid distribution in the core'. In accordance with the appellants' argument, the Board questions whether the channels of feature 8 indeed 'improve' liquid distribution. Absent any indication of channel dimensions (length, width, depth) or orientation (longitudinal, transverse), the fluid distribution cannot be seen to be improved over that already achieved in D1. The presence of such unspecified channels are seen to merely provide a different distribution of fluid in the core such that the objective technical problem should be less ambitiously drafted, and is seen to be 'how to provide a different or alternate/alternative distribution of fluid in the core'. The suggestion of opponent II that the technical problem to be solved related to an improved fit of the absorbent article is also not seen to be objective without an indication in feature 8 of

the orientation of the channels to allow e.g. preferential folding of the core in a direction promoting an improved fit.

1.2.2 The Board finds that, irrespective of whether the objective problem relates to an improved or merely a different or alternate/alternative fluid distribution, paragraph [0116] of D3 discloses channels 11 provided in the core layers which realise the advantage of improved fluid handling performance as discussed in paragraph [0011] of D3. Consequently, when trying to solve the technical problem, even if formulated as an "improved" fluid distribution, the teaching of D3 guides the skilled person to modify D1 so as to reach the subject-matter of claim 1 without exercise of an inventive step.

1.2.3 The respondent argued that paragraph [0117] of D3 disclosed the channels being provided merely in the upper SAP layer of the core to allow fluid to penetrate more quickly through the whole absorbent core i.e. into the bottom mixed layer, thus avoiding gel blocking by the top layer; it did not guide the skilled person to provide channels for the purpose of improving fluid distribution in the core, let alone in the mixed layer. This argument is not accepted for at least two reasons. Firstly, paragraph [0116] explicitly discloses channels optionally being formed in both the SAP layer and the mixed layer so, contrary to the argument of the respondent, no limitation of channels solely to the layer consisting of SAP is recognised in D3, in particular not one which is solely for the purpose of providing a passage through the SAP to the underlying mixed layer. Only in paragraph]0117], and in a particular orientation of the absorbent core, is a particular advantage of the channels in the SAP layer

of avoiding SAP hindrance (gel blocking) an issue. The teaching of D3 is thus more general than argued by the respondent. Secondly, as the respondent itself argued in relation to the formulation of the problem to be solved, the skilled person knows that "channels" inherently perform the function of promoting the distribution of fluid throughout an absorbent core. The disclosure of a specific function of channels (i.e. fluid transfer in a thickness direction of the absorbent core) in paragraph [0117] of D3 thus does not limit the skilled person's appreciation to solely this specific function, rather they would still consider the function of more general distribution of fluid in the absorbent core (i.e. along the length of a channel) to be implicitly disclosed by D3.

1.2.4 The respondent's contention that channels also being provided in the bottom mixed layer was specifically related to making the channels in the SAP layer permanent is also not accepted. Whilst paragraph [0123] of D3 indeed discloses channels in both layers in the context of these being permanent channels, this is indicated to be optional ('permanent channels may in particular be formed'). The disclosure of channels in the mixed layer without this limitation to permanent channels in paragraph [0116] is considered an unambiguous general disclosure of channels in the mixed layer, which would guide the skilled person to provide channels in the absorbent core of D1 in order to solve the posed objective technical problem of providing an improved or alternate liquid distribution in the absorbent core.

1.2.5 Additionally in this regard as argued by the appellants, in paragraph [0124] the use of "the channels" to reduce the risk of saturation at the

discharge location in the absorbent layer is described. Avoiding saturation implies moving fluid away from that location. The function of the channels could therefore only be providing a further means for such movement, i.e. also along the channels. This is, not least, because if the flow intended by D3 were simply a downward flow through the SAP layer channels to the underlying mixed layer, the presence of the superposed channels in the SAP and mixed layer (i.e. such that no absorbent material is present underneath the SAP channels, as shown in Fig. 18) would not make sense. Hence it is evident to a skilled person that the liquid handling mechanism could only realistically be understood to be achieved by fluid movement along the channels.

1.2.6 It thus follows that, starting from D1 and wishing to solve the posed objective technical problem, the skilled person would be guided by D3 to modify D1 thereby reaching the claimed subject-matter without exercising an inventive step.

1.3 The ground for opposition under Article 100(a) EPC is thus prejudicial to maintenance of the patent as granted.

1.4 Absent any further requests for consideration by the Board, the patent must 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:

C. Spira M. Harrison

Decision electronically authenticated