

Internal distribution code:

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

**Datasheet for the decision
of 9 September 2021**

Case Number: T 0153/18 - 3.2.06

Application Number: 10843196.6

Publication Number: 2524679

IPC: A61F13/49, A61F13/15,
A61F13/53, A61F13/534

Language of the proceedings: EN

Title of invention:

WATER-ABSORBABLE SHEET STRUCTURE

Patent Proprietor:

Sumitomo Seika Chemicals Co., Ltd.

Opponent:

The Procter & Gamble Company

Headword:

Relevant legal provisions:

EPC Art. 83, 123(2), 113(1)

Keyword:

Sufficiency of disclosure - main request and auxiliary requests 1 to 3 - (no)
Amendments - intermediate generalisation - auxiliary requests 4 and 5 - (yes)
Right to be heard - opportunity to comment (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0153/18 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 9 September 2021

Appellant: The Procter & Gamble Company
(Opponent) One Procter & Gamble Plaza
Cincinnati, Ohio 45202 (US)

Representative: Elkington and Fife LLP
Prospect House
8 Pembroke Road
Sevenoaks, Kent TN13 1XR (GB)

Respondent: Sumitomo Seika Chemicals Co., Ltd.
(Patent Proprietor) 346-1, Miyanishi
Harima-cho
Kako-gun
Hyogo 675-0145 (JP)

Representative: J A Kemp LLP
14 South Square
Gray's Inn
London WC1R 5JJ (GB)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
23 November 2017 concerning maintenance of the
European Patent No. 2524679 in amended form.**

Composition of the Board:

Chairman M. Harrison
Members: M. Dorfstätter
E. Kossonakou

Summary of Facts and Submissions

- I. An appeal was filed by the appellant (opponent) against the interlocutory decision of the opposition division finding that, on the basis of the main request, European patent No. 2 524 679 (hereinafter "the patent") met the requirements of the EPC. It requested that the decision under appeal be set aside and the patent be revoked.
- II. In its reply to the grounds of appeal, the respondent (patent proprietor) requested that the appeal be dismissed or, alternatively, that the patent be maintained on the basis of one of auxiliary requests 1 to 5, originally filed with letter dated 27 September 2017 and resubmitted with their reply.
- III. The Board issued a summons to oral proceedings and a subsequent communication containing its provisional opinion, in which it indicated *inter alia* that the Board considered that claim 1 of the main request was not sufficiently disclosed in the sense of Article 83 EPC and that none of the auxiliary requests overcame this objection or fulfilled the requirement of Article 123(2) EPC.
- IV. No submission was received in response to the Board's communication.
- V. Oral proceedings by videoconference were held before the Board on 9 September 2021 with the consent of both parties.

The parties' final requests remained as stated under items I. and II. above.

VI. The following document, referred to by the appellant in its grounds of appeal, is relevant to the present decision:

E3 Experimental report

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

"A water-absorbent sheet structure comprising a structure in which an absorbent layer comprising a water-absorbent resin and an adhesive is sandwiched with nonwoven fabrics from an upper side and a lower side of the absorbent layer, wherein the water-absorbent resin is contained in an amount of from 100 to 1,000 g/m², and wherein a mass-average particle size of the water-absorbent resin is from 50 to 800 µm, as measured according to the procedure described in the description and wherein a particle size rate index of the water-absorbent resin is 0.11 s/µm or less, wherein the particle size rate index is calculated by dividing a water-absorption rate of saline solution of the water absorbent resin, as measured according to the procedure described in the description, by the mass average particle size of the water-absorbent resin and wherein the water-absorbent sheet structure has a peeling strength of from 0.05 to 3.0 N/7 cm, as measured according to the procedure described in the description and the adhesive in the water-absorbent sheet structure is contained on a mass basis in a proportion in the range of from 0.1 to 1.0 times the amount of the water-absorbent resin contained."

VIII. In auxiliary request 1, the following feature is appended to claim 1 of the main request:

"and wherein the water-absorbent resin and adhesive are mixed in the absorbent layer".

- IX. In auxiliary request 2, the following feature is appended to claim 1 of the main request:

"and the non-woven fabrics are made of polypropylene".

- X. In auxiliary request 3, both features added in auxiliary requests 1 and 2 are appended to claim 1 of the main request.

- XI. In auxiliary request 4, the following feature is appended to claim 1 of the main request:

"and wherein the water-absorbent resin and adhesive are mixed in the absorbent layer and the mixed water-absorbent resin and adhesive is evenly dispersed on one of the nonwoven fabrics".

- XII. In auxiliary request 5, the following feature is added to claim 1 of auxiliary request 4:

"and the non-woven fabrics are made of polypropylene".

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

The invention defined in claim 1 of the main request was not disclosed in a manner sufficiently clear and complete for it to be carried out, since the skilled person was unable to carry out the peeling strength feature over the whole ambit of claim 1 with a reasonable degree of certainty. The test procedure described in the description failed to indicate the positions at which the samples were to be cut. In a

water-absorbent sheet structure, in which the resin and/or the adhesive of the absorbent layer were non-uniformly distributed and which thus had variations in the peeling strength, the skilled person did not know where to measure this parameter. E3 showed one example of such a structure. Whether the structure was part of an article was not relevant. Paragraph 0112 of the patent described that the structure was to be cut into a square of 7 x 7 cm to form the test sample. It was however nowhere stated which part of the structure had to be chosen for the cut. It was thus not possible to carry out the invention with any reasonable degree of certainty.

The invention defined in claim 1 of each of auxiliary requests 1 to 3 respectively was also not sufficiently disclosed for the same reason.

Claim 1 of auxiliary requests 4 and 5 defined subject-matter extending beyond the content of the application as filed due to an unallowable intermediate generalisation. The alleged basis in paragraph 0050 of the description included further features, namely that the resin and the adhesive were mixed in the form of a powder and that the layers were subjected to heating to activate the adhesive. The heating would leave a mark on the product obtained.

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

The invention of claim 1 of the main request was sufficiently disclosed for it to be carried out by a skilled person. The appellant's objection of a lack of sufficiency was not substantiated. When the Board's communication was received, this was the first time in

the proceedings that the idea of a non-homogeneous structure had been introduced in respect of the objection of a lack of sufficiency of disclosure. Since the first opportunity to comment on this issue was at the oral proceedings, the respondent's right to be heard was infringed.

Even if the water-absorbent layer were not uniform, it was still possible for the skilled person to form a water-absorbent sheet structure falling within the scope of the claim. If there were a structure that met the conditions laid down in the claim, then the skilled person had arrived at the invention. The test report E3 showed that it was possible to carry out the test procedure without any problem. It was furthermore a "structure" that was claimed, not an absorbent article as shown in E3.

The inventions defined by claim 1 of each of the auxiliary requests 1 to 3 were also sufficiently disclosed.

Claim 1 of auxiliary requests 4 and 5 did not define subject-matter extending beyond the content of the application as filed. Claim 1 was a product claim in which features had only been taken over from the method described in paragraph 0050 of the description as filed which were discernible on the claimed product. The feature of a "powder" was implicitly present due to definition of a mass-average particle size from 50 to 800 μm . The step of heating did not lead to a feature that would be discernible on the claimed water-absorbent sheet structure.

Reasons for the Decision

1. *Main request*

1.1 The subject-matter of claim 1 of the main request is not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, contrary to Article 83 EPC. In particular, the skilled person has insufficient information as to where on the water-absorbent sheet structure the test samples are to be cut for measuring the claimed parameter relating to the peeling strength. In a structure with non-uniform properties, the results obtained from the peeling strength test, which must fulfil certain parameter values (i.e. 0.05-3.0 N/7cm when having taken five samples and discarding the lowest and highest peeling strength values of the samples) in order to arrive at a structure according to the invention, are dependent on the positions selected for cutting the samples. Arriving at the invention or not is thus dependent on a choice of where to take the samples for any water-absorbent sheet structure with non-uniform properties. The choice of where to take the samples is however not guided by any information in the patent and is therefore arbitrary.

1.2 The respondent did not dispute that claim 1 covers water-absorbent sheet structures with both uniform and non-uniform properties. It argued, however, that the objection of lack of sufficiency was not substantiated and that the first time in the proceedings that the idea of a non-homogeneous structure of the sample was introduced in respect to the objection of a lack of sufficiency of disclosure was, when the Board referred

to this issue by using the terminology of "anisotropic properties" in the sample (see item 2.1 in the communication). The respondent further argued that by having the first opportunity to comment on this issue only at the oral proceedings, its right to be heard was infringed.

1.3 These arguments are however not accepted by the Board.

1.3.1 Differences between measurements of the peeling strength at different locations of a single structure are to be expected when the samples lie in areas of non-uniform distribution of the resin and/or adhesive (as stated by the appellant in its grounds of appeal in item 5.2, emphasis by the Board) or from a non-uniform mixture of the constituents. The latter was referred to by the appellant in its grounds of appeal when arguing that there was no requirement in claim 1 for the absorbent layer comprising resin and adhesive to be provided as a homogeneous, or uniform mixture of these materials (emphasis by the Board).

Although the latter argument was presented in item 4.2 of the appeal grounds and thus under the heading of "claim interpretation", it is self-evident that any of the two mentioned potential reasons for the non-homogeneity leads to non-uniform properties in the sheet structure and may thus yield different results when applying the test method of the patent, thereby resulting in a lack of sufficiency of disclosure. It is due to the arbitrariness when selecting a position on the structure at which the sample is cut out that any non-homogeneity leads to the test method not yielding reliable results. This is independent from the reason for, and the nature of, the non-homogeneity.

The Board thus concludes that a diligent reader should have understood that the appellant's objection of a lack of sufficiency was based on non-uniform properties of the sheet structure (which is regarded equivalent to the wording "anisotropic properties" as formulated in the Board's communication). It is irrelevant whether the non-homogeneous distribution of adhesive and/or resin in the absorbent layer is due to a non-homogeneous dispersion of the mixture on the absorbent layer or due to a non-homogenous mixture. This is also accentuated in paragraph 5.2 of the grounds of appeal, under the heading of "Insufficiency of disclosure" and after a reference to Article 83 EPC in paragraph 5.1, where paragraph 5.2 refers to "embodiments in which the resin and/or adhesive of the absorbent layer are non-uniformly distributed, as set out in the preceding section (of) these grounds of appeal" (emphasis by the Board). Thus the Board cannot concur with the understanding of this objection by the respondent that it was limited to a non-homogeneity resulting from a non-uniform distribution of a homogenous mixture of resin and adhesive on the absorbent layer, but did not relate to a non-homogeneity resulting from a non-uniform distribution of the resin and adhesive in the mixture, as explicitly mentioned in paragraph 4.2 to which this sentence refers.

The objection under Article 83 EPC was therefore, on any normal reading, to be understood as being based on any kind of non-uniform properties of the structure resulting in different peeling strengths at different locations.

The Board thus rejects the allegation that the respondent was confronted for the first time in the communication of the Board with the objection of a lack

of sufficiency of disclosure resulting from a non-homogeneous structure.

1.3.2 The objection was also sufficiently substantiated so as to be fully understood. The appellant explained the dependency of the value of the measured peeling strength from the position on the absorbent structure from which the test piece is obtained (see also grounds of appeal, paragraph 5.13) and from the direction in which the test pieces are peeled apart. The appellant also referred to the test report of E3 which exemplified a non-uniform structure in the sense that the front and back half exhibit a different basis weight of the water-absorbent resin particles. The Board regards it as implicit that the difference in peeling strength that was measured is due to the non-uniform distribution of resin and adhesive in the absorbent layer.

1.3.3 The Board thus merely reiterated in its communication that, when applying the test method presented in the patent to a water-absorbent sheet structure in which the resin and the adhesive are not uniformly distributed and/or not homogeneously mixed, different results were to be expected when measuring at different positions of the structure (see item 2.1 of the communication). In the sentence bridging pages 2 and 3 of the Board's communication, the Board referred to different results that would be caused when peeling from different edges of the same sample in a sample with anisotropic properties, reflecting what the appellant had argued at item 5.4 of its grounds of appeal, although the effect on the results of the edge chosen for starting the peeling test is ultimately not decisive for the reasoning given in this decision, such

that no further reasoning about these particular effects is required.

The Board thus also rejects the allegation that the appellant's right to be heard under Article 113(1) EPC was infringed by having the first opportunity to comment on this issue only at the oral proceedings. The respondent could (and should) have commented (already with its reply to the grounds of appeal) to the appellant's objection that there was insufficient disclosure over the whole ambit of the claim, due to the claim covering structures in which the resin and the adhesive of the absorbent layer are non-uniformly distributed (see paragraph 5.2 of the grounds of appeal).

1.4 During the oral proceedings, the respondent no longer disputed, as such, that a non-homogeneous distribution of resin and/or adhesive could lead to different results when measuring the peeling strength. Indeed, it is only logical that a sample providing high adherence over its area will have a higher peeling strength than a sample providing low adherence over its area. It did contest however that such different results impeded the skilled person from carrying out the invention. It argued that, even if the absorbent layer were not uniform, it was still possible for the skilled person to form a water-absorbent sheet structure falling within the scope of the claims. It further argued that if there were a structure that met the conditions laid down in the claim, then the skilled person had arrived at the invention. The respondent also argued that the test report E3 showed that it was in fact possible to carry out the test procedure without any problem.

1.5 These arguments are however not accepted by the Board.

- 1.5.1 For the requirements of Article 83 EPC to be met it is a precondition that the skilled person is able to carry out the invention over the whole scope of the claim. In the present case, this requires that a test method is presented that yields reliable and repeatable results also for structures with non-uniform properties.

In such structures however, the measured values depend, among other things (such as other parameters), on the positions on the structure from where the 7 x 7cm test samples are cut. The skilled person must therefore choose these positions. No guidance is given in the patent in this regard. Therefore, for one and the same structure and the same test procedure, the skilled person, based on an arbitrary choice, may or may not arrive at a measured value of the peeling strength of the invention.

The skilled person thus cannot know with any certainty whether they have arrived at a structure according to the invention or not.

- 1.5.2 The respondent's argument, that the appellant had not shown that it was impossible for the skilled person to produce a water-absorbent sheet structure falling within the scope of the claims, does not remedy the lack of sufficiency of disclosure about where to take the samples, in particular for other structures which are (perhaps) only inventions according to claim 1 when measured at specific locations, for which however no location information exists.
- 1.5.3 As regards the further arguments, that if there were a structure that met the conditions laid down in the claim, then the skilled person had arrived at the

invention, and that the test report E3 in fact showed that it was possible to carry out the test procedure without any problem, they also do not assist the skilled person when trying to measure a structure yielding different results depending on the positions at which the measurements are taken.

- 1.5.4 The further argument that a "structure" was claimed and not an absorbent article as shown in E3, does not alter the Board's findings either.

The Board concurs with the appellant's argument that E3 shows one example of a water-absorbent sheet structure. In the case of E3, the structure is also part of an article. This is however not relevant in view of the claimed subject-matter, since the structure in claim 1 has no limits which distinguish it from the structure measured in E3. The structure shown in E3 can be separated from the article and cut into squares of 7 x 7 cm to form the test samples in line with the procedure presented in paragraph 0112 of the patent. The information that is missing is however which part of the structure has to be chosen for the cut samples.

- 1.6 The test method described in the patent is thus insufficient for reliably establishing on a sheet structure the range of values of the peeling strength defined in the claim. The skilled person thus does not know whether they have carried out the invention based on the disclosure given in the patent, contrary to Article 83 EPC.

The main request is therefore not allowable.

2. *Auxiliary requests 1 to 3*

These requests do not differ from the main request with respect to the test procedure for determining the peeling strength. Further, the claims still clearly cover absorbent layers with non-uniform properties. This was also not disputed by the respondent.

The Board thus concludes that the subject-matter of claim 1 of auxiliary requests 1 to 3 is, contrary to the requirements of Article 83 EPC, not disclosed in a manner sufficiently clear and complete for it to be carried out by a skilled person for the same reasons as for the main request.

None of auxiliary requests 1 to 3 is therefore allowable.

3. *Auxiliary request 4*

3.1 The subject-matter of claim 1 extends beyond the content of the application as filed, contrary to Article 123(2) EPC. It is not clearly and unambiguously derivable from the application as filed to provide a mixture of the water-absorbent resin and the adhesive in the absorbent layer without the resin and the adhesive being in the form of a mixed powder, nor with an adhesive of another type than a thermal-fusing one which is fused or partially fused by heating during the production of the water-absorbent sheet structure.

3.2 As to the respondent's argument that claim 1 was a product claim in which only features were taken over from the method described in paragraph 0050 of the description which are discernible on the claimed product, and even if this approach is accepted, the

Board finds that each method step then has to be analysed as to whether it results in a recognisable property of the product and whether this has been defined. The Board finds that at least the features "powder" and "heating" result in such properties as laid out below. The discernible properties of the sheet structure resulting from these are however not claimed.

3.3 With regard to the respondent's argument that the feature of a "powder" was implicitly present due to the definition in the claim of a mass-average particle size from 50 to 800 μm , this is only the case for the water-absorbent resin but not for the adhesive. The form of the adhesive is not defined in claim 1. Paragraph 0050 of the application as filed refers to a "mixed powder" of a water-absorbent resin and an adhesive, which the skilled person would understand as meaning that both the resin and the adhesive are present in the form of a powder. No direct and unambiguous disclosure can be found that this would not be present in the manufactured structure (see also below as regards the heating of the adhesive). With the claim not being limited to adhesive in the form of a powder and having no other feature which implies that this is the case, this amounts to an intermediate generalisation of the embodiment in paragraph 0050, which is not directly and unambiguously derivable from the application as filed.

3.4 As regards the respondent's argument that the step of heating did not lead to a discernible feature of the claimed water-absorbent sheet structure, this is not accepted. It is clear that the heating described in paragraph 0050 is performed to activate the adhesive since this paragraph states that the heating is performed to "near a melting point of the adhesive". The underlying embodiment thus implicitly uses a

thermal-fusing adhesive, whilst claim 1 and the patent as a whole are not limited to such type of adhesive. This is also corroborated by the introductory formulation of paragraph 0048 "When a thermal-fusing adhesive is used,...". Other types of adhesive are thus feasible, but not derivable from the application as filed in connection with the embodiment of paragraph 0050.

The use of an adhesive which is of a thermally fusible type, whether partly or fully fused due to the applied heat, leaves no reason to conclude that the type of adhesive would not still be discernible in the structure obtained by the described method. With the claim merely defining an adhesive and not being limited to a thermal-fusing adhesive, this constitutes a further intermediate generalisation that is not directly and unambiguously derivable from the application as filed.

- 3.5 Claim 1 of auxiliary request 4 thus defines subject-matter which is an unallowable intermediate generalisation of the content of the application as filed, such that the requirement of Article 123(2) EPC is not fulfilled.

Auxiliary request 4 is therefore not allowable.

4. *Auxiliary request 5*

As also acknowledged by the respondent, auxiliary request 5 adds nothing in respect of the intermediate generalisation which contravenes Article 123(2) EPC in auxiliary request 4.

Auxiliary request 5 is thus also not allowable.

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