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**Datasheet for the decision  
of 15 December 2015**

**Case Number:** T 1412/11 - 3.3.09

**Application Number:** 98946033.2

**Publication Number:** 1011966

**IPC:** B32B27/12, D04H13/00,  
A61F13/15, C08J5/18

**Language of the proceedings:** EN

**Title of invention:**  
BREATHABLE ELASTIC FILM AND LAMINATE

**Patent Proprietor:**  
KIMBERLY-CLARK WORLDWIDE, INC.

**Opponent:**  
The Procter & Gamble Company

**Headword:**

**Relevant legal provisions:**  
EPC Art. 54, 56, 83, 84, 123(2)

**Keyword:**  
Inventive step - (no)

**Decisions cited:**

G 0003/14

**Catchword:**



**Beschwerdekammern**  
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Case Number: T 1412/11 - 3.3.09

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.09**  
**of 15 December 2015**

**Appellant:** The Procter & Gamble Company  
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**Representative:** Davies, Christopher Robert  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
27 April 2011 concerning maintenance of the  
European Patent No. 1011966 in amended form.**

**Composition of the Board:**

**Chairman** W. Sieber  
**Members:** N. Perakis  
F. Blumer

## Summary of Facts and Submissions

- I. This decision concerns the appeal filed by the opponent against the interlocutory decision of the opposition division that European patent No. 1 011 966 as amended meets the requirements of the EPC.
- II. In its notice of opposition the opponent had requested revocation of the patent in its entirety on the grounds of Articles 100(a) (lack of novelty and inventive step), 100(b) and 100(c) EPC.

The documents submitted by the opponent included the following:

D2: US 4 613 643 A;  
D4: US 4 938 757 A; and  
D5: WO 95/16562 A1.

- III. In its decision the opposition division maintained the patent in amended form on the basis of claims 1-35 filed as the main request on 30 November 2007.

Claims 1, 30 and 31, which corresponded to claims 1, 43 and 44 as granted, read as follows:

"1. A soft, breathable laminate comprising:

a film loaded with a filler having a particle size suitable for pore formation, said film having been stretched in at least two directions to form a plurality of micropores; and  
a nonwoven web,

characterized in that the laminate is elastic and in that the film is a substantially water vapor impermeable

elastic film and wherein the nonwoven web is bonded to said elastic film after stretching of said elastic film in at least one of said directions."

"30. A process for producing a soft, breathable elastic laminate comprising the steps of:

stretching a substantially water vapor impermeable elastic film loaded with a filler having a particle size suitable for pore formation in at least two directions so as to form a plurality of micropores; and bonding a nonwoven web to said stretched elastic film, forming the laminate."

"31. A process in accordance with claim 30, wherein said substantially water vapor impermeable elastic film is stretched in a machine direction followed by stretching in a cross-machine direction."

IV. On 23 June 2011 the opponent (in the following: the appellant) filed an appeal against said decision.

In the statement setting out the grounds of appeal, filed on 7 September 2011 and including an experimental report (E1), the appellant requested that the decision under appeal be set aside and the patent be revoked in its entirety. The appellant considered that the opposition division was wrong to conclude that the claims of the proprietor's main request defined an invention that was sufficiently disclosed, and that the claimed subject-matter was novel and involved an inventive step.

V. By letter dated 12 January 2012, the patent proprietor (in the following: the respondent) requested that the

appeal be dismissed. Amended claims which formed first to sixth auxiliary requests were also filed.

VI. By letter dated 10 April 2012, the appellant submitted documents D7, D8, E2 and E3 and raised a new novelty objection on the basis of D7:

D7: WO 98/29480 A (cited under Article 54(3) EPC);

D8: US 6 420 625 B1 (no prior art since published on 16 July 2002);

E2: Statement of Dr Bryn Hird dated 4 April 2012; and

E3: ASTM Designation: D412-06a.

VII. By letter dated 15 October 2012, the respondent filed a new main request and six auxiliary requests, which were partially replaced by letter dated 7 February 2014 with amended main, 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup> and 5<sup>th</sup> auxiliary requests.

Claim 1 of the main request as filed with letter dated 7 February 2014 reads as follows:

"1. A diaper outer cover or surgical gown, comprising a soft, breathable laminate, the laminate comprising:

- a film loaded with a filler having a particle size suitable for pore formation, said film having been stretched in at least two directions to form a plurality of micropores; and
- a nonwoven web,

characterized in that the laminate is elastic and in that the film is a substantially water vapor impermeable elastic film and wherein the nonwoven web is bonded to said elastic film after stretching of said elastic film in at least one of said directions."

VIII. First oral proceedings before the board were held on 10 April 2014 during which the patentability of the subject-matter of the main request (sufficiency of disclosure, novelty and inventive step) was discussed. The board came to the conclusion that this request fulfilled the requirements of sufficiency and novelty, but that it was not based on an inventive step.

As to auxiliary request 1, the board pointed out that the pending referral to the Enlarged Board in G 3/14 appeared to affect the discussion on this request so far as Article 84 EPC was concerned. It was therefore agreed that the appropriate course would be to stay the proceedings to await the outcome of this reference and continue the proceedings in writing.

IX. By letter dated 6 May 2014, the respondent filed new first and second auxiliary requests. The remaining auxiliary requests on file were maintained and should be renumbered accordingly.

X. By letter dated 23 July 2014, the appellant filed observations on the new requests.

XI. After the publication of decision G 3/14 of the Enlarged Board of Appeal the parties were summoned to second oral proceedings to be held on 15 December 2015.

XII. By letter dated 13 November 2015, the appellant argued that the subject-matter of the auxiliary requests lacked an inventive step and filed a further signed and dated statement of Dr Bryn Hird (E4).

XIII. By letter dated 13 November 2015, the respondent filed **a new main request**, five auxiliary requests, and withdrew all previous requests on file. Only the main request is

relevant for this decision, as the auxiliary requests were ultimately withdrawn during the second oral proceedings (see below point XIV). Claim 1 of this final main request reads as follows:

"1. A process for producing a soft, breathable elastic laminate comprising the steps of:

stretching a substantially water vapor impermeable elastic film loaded with a filler having a particle size suitable for pore formation in two directions so as to form a plurality of micropores; and

bonding a nonwoven web to said stretched elastic film, thereby forming the laminate, wherein said substantially water vapor impermeable elastic film is stretched in a machine direction followed by stretching in a cross-machine direction, and wherein the laminate is elastic in the cross-machine direction."

XIV. On 15 December 2015, second oral proceedings were held before the board. The issues discussed in relation to the subject-matter of the main request were clarity, added subject-matter, novelty and inventive step. The appellant maintained the objection of insufficiency but did not make any further submissions. After the board came to the conclusion that the subject-matter of claim 1 of the main request lacked an inventive step, the respondent withdrew all pending auxiliary requests.

XV. The relevant arguments for this decision put forward by the appellant in its written submissions and at both oral proceedings may be summarised as follows:



### Clarity

- Claim 1 lacked clarity since bonding a nonwoven web to "said" stretched elastic film did not necessarily mean that the elastic film had already been stretched in two directions. The patent specification did not only concern stretching in two directions but also stretching in more than two directions (page 6, lines 27-28).
- In order to overcome this objection, the respondent should add the following wording to the claim: "bonding a nonwoven web to said stretched elastic film after said stretching in two directions".
- Furthermore, the meaning of "elastic" in the expression "elastic laminate" in line 1 of claim 1 of the main request, already present in corresponding claim 43 as granted, was different from the meaning of "elastic" in the expression "laminate is elastic in the cross-machine direction" in the last line of claim 1, deriving from the description. This gave rise to an objection of lack of clarity in view of G 3/14.
- Lastly, it was not clear whether "elastic" was an absolute or relative term.

### Inventive step

- D2 should be considered as representative of the closest prior art. Example 1 disclosed a porous elastic film which had been stretched simultaneously in the machine direction and the cross-machine direction and which had satisfactory

breathability. This biaxially stretched film was bonded to a fibrous or cloth-like reinforcing material, which the skilled person would recognise as a nonwoven web. The laminate was used as a waterproof cover for a sanitary article or other material to be applied to a human body.

- D2 did not disclose that the laminate retained the properties of the elastic film.
- The technical problem was seen in the lamination of an elastic film onto a nonwoven web so that the elastic properties were maintained.
- The technical problem alleged by the respondent, namely the improvement in elastic properties and breathability, was not shown to have been solved over the whole claimed range. Even if films 4 and 5, which had been stretched sequentially in the machine direction and the cross-machine direction, provided improved results over the monoaxially stretched films 1 to 3 (table 1 and paragraph [0047]), and even if the elastic properties of film 4 (first stretched in the machine direction and then in the cross-machine direction) were better than those of film 5 (reversed order of stretching), no details had been disclosed in the patent concerning the production of these films. Therefore, the origin of this improvement was unknown. Regardless, according to a preferred embodiment of the patent, relaxation took place after stretching (paragraphs [0042] and [0043]), which could be a plausible origin for the advantageous properties of film 4. This origin of the effect was corroborated by E4, a statement of the technical expert, Dr Bryn Hird. However, the

claimed process did not contain such a relaxation feature. In view of these explanations, it was not the order of stretching that provided the effect. Thus, the claimed order corresponded to an arbitrary choice of the skilled person.

- Furthermore, there was no evidence that an improvement was obtained by the claimed sequential stretching over the simultaneous biaxial stretching of example 1 of D2.
  
- Lastly, the claimed process was obvious in view of the prior art. The skilled person starting from the elastic film of D2 would obviously have bonded it to a nonwoven web in order to obtain a laminate, since this had already been suggested in D2 (column 1, lines 13-19; column 5, lines 29-35). In doing so, he would have expected that the properties of the elastic film would be maintained in the laminate structure, as this had been disclosed in D4 and D5. In particular, D4 (column 4, lines 22-25; column 4, line 65 to column 5, line 2; figures 6 and 7) disclosed that such a laminate was elastic in all directions, thus including the cross-machine direction.
  
- In conclusion, the subject-matter of claim 1 did not involve an inventive step.

XVI. The relevant arguments for this decision put forward by the respondent in its written submissions and at both oral proceedings may be summarised as follows:

Clarity

- The stretched elastic film, which in the second process step was bonded to a nonwoven web, was the elastic film stretched in two directions according to the first process step. This was the only sensible reading of claim 1.
  
- The term "elastic" used to characterise the laminate in the first line of claim 1 had the same meaning as the term "elastic" used to characterise the laminate in the last line of this claim. The definition of this term was given in the patent (paragraph [0018]) and applied to any material (film or laminate). Therefore, the fact that the feature in the last line of claim 1 originated from the description did not give rise to an objection of lack of clarity in view of G 3/14.

Inventive step

- D2 could be considered to be the closest prior art. Nevertheless, as D2 disclosed both mono- and biaxially stretched films, the skilled person had no reason to select a biaxially stretched film such as that of example 1 as the most promising starting point. Such a selection by the appellant was based on hindsight.
  
- D2 did not disclose:
  - a stretchable nonwoven web;
  - the lamination of a stretchable nonwoven web with a biaxially stretched film;
  - that the laminate was elastic in the cross-machine direction.

- The problem underlying the claimed invention in view of D2 was the provision of a method for producing a laminate with improved elasticity and breathability (patent paragraph [0007]).
- The problem was solved by the use of a film stretched first in the machine direction and then in the cross-machine direction, which worked as a spring and which, laminated on a nonwoven web, improved the elasticity and breathability of the laminate.
- There was no pointer in D2 concerning the specific sequential, biaxial stretching of the film in order to improve the flexibility and breathability of the laminate. Example 1 of D2 disclosed only an elastic film which had been simultaneously biaxially stretched. Admittedly, this film had good elastic and breathability properties. The required motivation was also not found in D4 or D5. The alleged combination by the appellant was based on hindsight.
- Even if the process for the preparation of films 4 and 5 was not disclosed in detail in the patent, the results of table 1 showed at least a trend regarding the improvement of the elastic properties.
- The appellant's argument regarding the relaxation step was late-filed and should not be taken into consideration.
- As regards document E4, it contained theoretical, non-convincing explanations.

XVII. The appellant requested that the decision under appeal be set aside and that European patent No. 1 011 966 be revoked.

XVIII. The respondent requested that the patent be maintained on the basis of the claims of the main request filed by letter dated 13 November 2015.

### **Reasons for the Decision**

#### 1. Clarity

1.1 Claim 1 of the main request basically derives from claims 43 and 44 as granted (see point III above) and comprises the steps of stretching a substantially water vapor impermeable elastic film loaded with a filler in two directions so as to form a plurality of micropores; and bonding a nonwoven web to said stretched elastic film, thereby forming the laminate. Furthermore, it is specified that the laminate is elastic in the cross-machine direction.

1.2 The appellant asserted that "bonding a nonwoven web to **said** stretched elastic film" did not necessarily mean that the nonwoven web is bonded to the film stretched in two directions. This was so because, according to the patent specification, the latter might have been stretched in more than two directions, specifically three or more directions (page 3, lines 8 and 21; page 6, lines 27-28).

The board does not agree. In claim 1 the stretching of the film has been limited to two directions as opposed to granted claim 43 which stated "at least two directions". Thus, the only sensible reading of the

present claim is that the use of the term "said" makes the link between the antecedent elastic film stretched in two directions (the result of the first process step), with the film to be bonded to a nonwoven web in the next step. There is no doubt that this is one and the same film.

1.3 Furthermore, the board, contrary to the appellant, does not consider it necessary to specify in claim 1 that bonding a nonwoven web to said stretched elastic film takes place "after said stretching in two directions". This feature is implicit to the wording used in claim 1 and therefore superfluous.

1.4 The appellant also asserted that the feature taken from the description, namely that the laminate is "elastic in the cross-machine direction", altered the meaning of the "elastic laminate" at the beginning of the claim. The appellant asserted that this objection was admissible by virtue of the ruling in G 3/14.

However, as correctly pointed out by the respondent during the second oral proceedings, there is no ambiguity concerning the meaning of the term "elastic". Throughout the patent specification this term has one single meaning whose definition is provided in paragraph [0018] and reads as follows:

*"The term "elastic" is used herein to mean any material which, upon application of a biasing force, is stretchable, that is elongatable, to a stretched, bias length which is at least 150% of its relaxed unbiased length, and which will recover at least 50% of its elongation upon release of the stretching, elongating force".*

According to this definition, "elastic" relates to a minimum stretchability and minimum recovery of the film upon release of the stretching force.

Moreover, by referring to "any material" the above paragraph makes it clear that the elasticity is a property not only of the film used to make the laminate of claim 1, but also of the laminate resulting from the claimed process.

The added feature "wherein the laminate is elastic in the cross-machine direction" simply serves to indicate that the minimum elasticity required for the laminate according to claim 1 is the elasticity in the cross-machine direction.

Thus, the feature regarding the elasticity of the laminate in the cross-machine direction, although taken from the description, neither alters the meaning of the term "elastic laminate" nor introduces a new meaning of this term. Consequently, its insertion in claim 1 of the main request is not objectionable in view of G 3/14.

1.5 In light of the above, the board considers that the subject-matter of claim 1 of the main request meets the requirements of Article 84 EPC.

2. Sufficiency / added subject-matter / novelty

2.1 At the first oral proceedings the board concluded that the invention underlying claim 1 of the then main request (see above, section VIII) satisfied the requirements of Article 83 EPC. During the second oral proceedings the appellant stated that it relied on its previous submissions. The board considered that the issues raised regarding the previous main request in the



context of sufficiency of disclosure applied equally to claim 1 of the present main request.

2.2 Furthermore, the appellant raised objections under Article 123(2) EPC against claim 1 and disputed the novelty of the subject-matter of claim 1 in light of example 4 of the late-filed document D7 (Article 54(3) EPC). At the second oral proceedings the board reached the conclusion that claim 1 fulfilled the requirements of Articles 123(2) and 54 EPC.

2.3 However, since the main request was ultimately not allowable for lack of inventive step, it is not necessary to further elaborate on the issues of sufficiency, added subject-matter and novelty.

3. Inventive step

3.1 The closest prior art

3.1.1 D2 discloses a process for the preparation of soft porous sheets which involves forming a composition comprising (i) 40 to 80% by weight of an inorganic filler and (ii) a 60 to 20% by weight of a polyolefin type thermoplastic elastomer composition into a sheet. The sheet has a structure in which the inorganic powder is dispersed in a matrix of the polyolefin type thermoplastic elastomer and fine pores (micropores) are present between the inorganic powder and the matrix. The sheet has a rubbery elasticity, is water impermeable but air permeable. It can be used, for example, as a waterproof cover, a medical or sport supporter and a sanitary article without or after backing it with a cloth (see column 1, lines 4-19; column 5, lines 22-35). D2 therefore lies in the same technical field as the patent in suit, namely the field of soft, breathable and

elastic laminates, particularly useful as an outer cover for disposable personal care articles and articles to be used in the medical field. Furthermore, as D2 discloses stretching of the elastic film in both directions either simultaneously or sequentially (column 4, lines 19-29; examples 1, 5-10), the board considers D2 to represent the closest prior art. The respondent did not raise any objection in this regard.

3.1.2 The most relevant part of D2 is example 1 (see column 6, line 57 to column 7, line 16 and table 1), which discloses a process for producing a polymeric porous sheet by simultaneously stretching it in both the longitudinal direction and the lateral direction. In more detail, example 1 discloses that the composition used for the sheet/film comprised:

- 50 g of an ethylene-butene-1 copolymer in which the stress at 25°C under 100% stretching (100% modulus) was 60 kg/cm<sup>2</sup>, the elongation at break was 70% and the permanent strain after 100% stretching was 5%,
- 50 g of heavy calcium carbonate having an average particle size of 1.7 microns, and
- 2 g of a polyester-type plasticizer.

The above ingredients were melt-kneaded by a 3-inch roll heated at 190°C for 10 minutes, and press-formed into a sheet/film having a thickness of 0,3 mm. The sheet/film was stretched at 60°C at a stretching rate of 600 %/min, by a bench-scale biaxially stretching machine, **simultaneously** in both the longitudinal direction and the lateral direction. The stretching ratio was 2 in each direction. The stretched sheet/film was cooled to 25°C and taken out of the stretching machine.

The resulting stretched sheet/film was said to be somewhat shrunken and the stretching ratio was reduced, but as shown in table 1, it had a low tensile elastic modulus (40 kg/cm<sup>2</sup>), a high elongation at break (400%), a large elastic recovery (90% since the permanent strain was 10%), and the product was a porous film (porosity 43% and air permeability 160 sec/100cm<sup>3</sup>) rich in flexibility.

3.1.3 The process of claim 1 of the main request differs from the process of example 1 of D2 in that:

- the film is stretched in the machine direction followed by stretching in the cross-machine direction (sequential stretching),
- the stretched film is bonded to a nonwoven web in order to form a laminate, and
- the laminate is elastic in the cross-machine direction.

3.2 The technical problem and its solution

3.2.1 The respondent considered that the technical problem underlying the claimed invention in view of D2 was to provide a process for manufacturing an improved laminate. Reference was made to the patent in suit, in particular paragraphs [0007] and [0013], table 1 and paragraph [0047]; the latter discussing the results of table 1.

Table 1 summarises material properties for films suitable for use in laminates. Thus, films 1, 2 and 3 were stretched only in one direction, be it in the machine direction or the cross-machine direction. Films

4 and 5 were biaxially stretched, whereby film 4 was stretched first in the machine direction (MD) and then in the cross-machine direction (CD), whereas film 5 was stretched first in the cross-machine direction and then in the machine direction. According to the evaluation of the tested material, the biaxially stretched films showed better elastic and breathability properties than the monoaxially stretched films. The definition of the terms "elastic" and "breathable" are provided in paragraphs [0018] and [0019] of the patent, respectively.

Regarding the biaxially stretched films 4 and 5, table 1 shows that film 4 (MD then CD) was significantly more elastic in subsequent cross-machine direction stretches than film 5 (CD then MD). The better elasticity is evidenced by the permanent set data. Thus film 4 has a permanent set of 10,5%, whereas film 5 has a permanent set of 28%.

- 3.2.2 However, the origin of these differences, in particular with respect to films 4 and 5, is not clear, because the patent in suit does not specify how exactly films 1 to 5 were produced. Thus, as pointed out by the appellant, it is not convincing that the improved elasticity of film 4 could be obtained over the whole scope of claim 1. Apparently, the film-formation process requires the inclusion of relaxation after stretching in the first direction, before stretching it in the other direction (see patent paragraphs [0035], [0039], [0042], [0043] and [0045]); such a relaxation step is, however, not a feature of the claimed process.

The appellant's doubts in this respect are corroborated by the statement of Dr Bryn Hird (E4), who essentially stated that if no relaxation takes place, there is no

distinction between simultaneous and sequential biaxial stretching of a film. According to Dr Hird, the elastic properties of a polymer film depend, to a significant extent, on the alignment of the polymer molecules within the film material. Such an alignment is obtained when a precursor film is stretched, wherein the molecules tend to become more aligned in the direction of stretching (see E4, paragraphs 4 and 6). If the film is sequentially stretched in the machine and cross-machine directions, then its behaviour during stretching, and its subsequent alignment, depend on the process conditions - in particular whether the film is allowed to (i) relax in the machine direction after it has been stretched in this direction and before being stretched in the cross-machine direction (i.e., permitting elastic recovery); and (ii) contract in the machine direction while being subsequently stretched in the cross-machine direction (according to the Poisson effect). If the sequentially stretched film is prevented from relaxing in the machine direction before it is stretched in the cross-machine direction, and is prevented from contracting in the machine direction while being stretched in the cross-machine direction, then, upon relaxation at the end of the process, the sequentially stretched film may have essentially the same molecular orientation as the simultaneously stretched film (see E4, paragraphs 10 and 12).

Paragraph 14 of E4 highlights again the importance of the relaxation conditions - which are not a feature of claim 1 - with regard to the elastic properties of a stretched film, but also mentions other process conditions, including the relative extent to which the film is stretched in the two directions (which again is not a feature of the claim).

- 3.2.3 Furthermore, as pointed out by the appellant, the results of table 1 do not concern a comparison of film 4 (according to claim 1) with a film according to the closest prior art D2, namely a film simultaneously stretched in the machine and the cross-machine direction as in example 1 of D2. Thus, the specific sequential stretching has not been shown to have any technical effect over the closest prior art and it can only be considered as an arbitrary modification. As previously mentioned, D2 already disclosed sequential stretching of the film precursor before bonding to a nonwoven web (see examples 5-10).
- 3.2.4 The respondent's argument that the data of the patent (in particular film 4 of table 1) shows *prima facie* an effect, is not convincing. The effect relevant for the assessment of inventive step has to (i) derive from a comparison with the closest prior-art document D2 and (ii) be obtained over the whole scope of the claim. As set out above, this is not the case in the patent in suit.
- 3.2.5 Furthermore, the respondent's argument that the relaxation is a new issue that was raised late, is not convincing. First, it is a matter of fact that the process for the preparation of film 4 of table 1 is not completely disclosed. Secondly, in view of paragraphs [0039], [0042] and [0043] of the patent, relaxation is a preferred feature which might have been applied in the preparation of the exemplified films (best mode of carrying out the claimed invention).
- 3.2.6 Lastly, the respondent's argument that the statement of Dr Hird in E4 is based on theoretical explanations is also not convincing, because the respondent did not

contradict these explanations either by other theoretical explanations or by any technical evidence.

- 3.2.7 In light of the above, the board concludes that the technical effect of improved elasticity and breathability has not been shown.
- 3.2.8 Thus, the technical problem has to be reformulated and must concern the provision of a process for producing a laminate which maintains the breathability and elastic properties of the stretched film, at least in the cross-machine direction, after bonding it to a nonwoven web.
- 3.3 Obviousness
- 3.3.1 The issue of obviousness boils down to whether the skilled person, starting from the process for producing an elastic film of example 1 of D2 and aiming towards a process for producing a laminate, which maintains the breathability and elastic properties of the film in at least the cross-machine direction, would find in the state of the art the motivation to carry out the necessary modifications in the process of D2, which would lead to the claimed process.
- 3.3.2 D2 itself offers the skilled person the possibility and thus the motivation to use sequential stretching in place of simultaneous stretching of the film, since this is clearly disclosed as an alternative stretching method in examples 5 to 10 of D2. All the more so because the skilled person would consider the two alternatives as *prima facie* equivalent. As already set out above, no evidence has been filed to demonstrate any unexpected superiority of the claimed specific sequential stretching over the simultaneous stretching of example 1 of D2. Thus, the replacement of the simultaneous

stretching in example 1 of D2 by the claimed specific stretching is an obvious modification within the capabilities of the skilled person.

- 3.3.3 Furthermore, the step of binding the previously stretched film to a nonwoven web is also obvious in view of D2 which discloses in column 1, lines 1-19:

*"Furthermore, this sheet has a rubbery elasticity, and can be advantageously used for ... singly or in combination with a fibrous or cloth-like reinforcing material mixed with or bonded to the sheet of this invention."*

and column 5, lines 29-35:

*"Therefore, the porous sheet of this invention is valuably used as ... without or after backing with a cloth ..."*

In the eyes of the skilled person this is a clear reference to a nonwoven web.

Thus, the skilled person would find in D2 the hint to bond the stretched film to a nonwoven web in order to produce a commercial product.

- 3.3.4 D2 does not explicitly disclose that the laminate is elastic in the cross-machine direction. However, the skilled person would not expect that the elastic properties of the film in the cross-machine direction would be lost when the film is bonded to a nonwoven web. If this was the case, the manufacture of a laminate would not make sense. This is corroborated by D4 and D5 as set out below:



**D4** discloses a side panel of diaper which has elastic properties, i.e., it can be stretched and upon relaxing will tend to resume its original shape (column 3, lines 53-55). Such a panel consists of a stretch-bonded laminate that may have elastic properties in all directions and may be breathable, i.e. pervious to vapours but impervious to liquids (column 4, lines 23-26). Figures 6 and 7 illustrate a stretch-bonded laminate in the stretched and relaxed conditions, respectively. Stretch-bonded laminate 36 generally comprises an outer layer 38, an inner bodyside layer 40 and an elastic or stretchable layer 42 between layers 38 and 40 (column 4, lines 26-31). Layers 38 and 40 can be made of any woven or unwoven material, and are preferably made of a nonwoven material (column 4, lines 34-36). Typically, a stretch-bonded laminate is made by stretching the elastic or stretchable layer 42 to a selected elongation; placing a non stretched layer such as layer 38, 40 or both, on the stretched layer 42; bonding the layers together and allowing the layers to relax so that layer 42 gathers the other layers (column 4, line 65 to column 5, line 2).

**D5** concerns a breathable cloth-like film/nonwoven composite (i.e. the laminate with a nonwoven web of claim 1 of the main request) useful for diapers and gowns. The laminate is made from a breathable film which is thermally bonded to a fibrous polyolefin nonwoven web (page 4, line 35 to page 5, line 1). Typically, the film will have been extruded, stretched, thinned, and then wound up on a roll prior to being incorporated into the laminate (page 16, lines 19-26). D5 discloses that in order to cause the laminate to retract, one of the two layers has to be placed under tension during the bonding process so that it is temporarily stretched or expanded. Once the bonding has been completed, the stretching

forces are removed and the laminate retracts creating undulations (page 17, lines 1-5).

3.3.5 Therefore, the skilled person, starting from the teaching of D2 and aiming for the provision of a process for producing a laminate which maintains the elastic properties of the porous film and is elastic in the cross-machine direction, will find in D4 and D5 the motivation to bond the porous film after it has been stretched in the two directions with the nonwoven web and arrive at a soft, breathable, elastic laminate, which is also elastic in the cross-machine direction, without the exercise of any inventive skill.

3.4 In view of the above considerations, the subject-matter of claim 1 of the main request does not fulfil the requirements of Article 56 EPC and the main request is not patentable.

4. As the respondent withdrew all auxiliary requests, 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:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated