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**Datasheet for the decision  
of 26 January 2018**

**Case Number:** T 1271/13 - 3.2.05

**Application Number:** 02712390.0

**Publication Number:** 1369221

**IPC:** B29C55/14, C08J9/00, H01M2/16

**Language of the proceedings:** EN

**Title of invention:**

Successively biaxial-oriented porous polypropylene film and process for production thereof

**Patent Proprietor:**

New Japan Chemical Co., Ltd.

**Opponent:**

Treofan Germany GmbH & Co. KG

**Headword:**

**Relevant legal provisions:**

EPC 1973 Art. 54(2), 56, 114(2), 100(b), 100(c)  
EPC Art. 123(2), 123(3)  
RPBA Art. 12(4)

**Keyword:**

Late-filed document - not admitted  
Sufficiency of disclosure (yes)  
Amendments - added subject-matter - main request (yes) - added  
subject-matter - auxiliary request request (no)  
Novelty - implicit disclosure (no)  
Inventive step (yes)

**Decisions cited:**

G 0007/93, G 0002/98, G 0001/03, T 0975/94, T 0472/88,  
T 0759/10, T 0971/11

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

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Case Number: T 1271/13 - 3.2.05

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.05**  
**of 26 January 2018**

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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
26 March 2013 concerning maintenance of the  
European Patent No. 1369221 in amended form.**

**Composition of the Board:**

**Chairman**            M. Poock  
**Members:**            P. Lanz  
                              D. Rogers

## **Summary of Facts and Submissions**

- I. The respective appeals by the patent proprietor and the opponent are against the interlocutory decision of the opposition division on the version in which European patent EP-B-1 369 221 met the requirements of the European Patent Convention.
- II. During the opposition proceedings, the opponent raised the grounds for opposition according to Article 100(a) (lack of novelty and lack of inventive step), 100(b) and 100(c) EPC 1973.
- III. Oral proceedings were held before the board of appeal on 26 January 2018 in the absence of both parties as announced in their respective letters dated 19 December 2017 and 23 January 2018.
- IV. Appellant I (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained as granted or, alternatively, on the basis of the claims of Auxiliary Request 1, filed under cover of a letter dated 26 July 2013, or of Auxiliary Request 2, submitted during the oral proceedings before the opposition division, or of Auxiliary Request III, filed under cover of a letter dated 13 December 2013. It also requested that document D11a not be admitted into the proceedings.
- V. Appellant II (opponent) requested that the decision under appeal be set aside and that the patent be revoked.
- VI. The documents referred to during the appeal proceedings include the following:

D3: EP 1 292 380;

D11: Experimental report filed on 13 December 2012;

D11a: Amended version of document D11 filed with appellant II's statement of grounds of appeal.

VII. The independent claims as granted have the following wording:

"1. A successively biaxially stretched,  $\beta$ -crystal nucleating agent-containing polypropylene porous film, comprising a polypropylene-based resin (22) and a  $\beta$ -crystal nucleating agent (11n,11p), the film having a film thickness uniformity is 0.1 or less, and the film exhibiting the following pore structures (a) and (b) when observed in cross section in the longitudinal and transverse directions of the film under an electron microscope:

(a) in the cross section in the transverse direction: more lamella cross sections (2) are present than in the image of the cross section in the longitudinal direction; there are numerous pores (3) between these lamella cross sections; the maximum pore size in the thickness direction of the pores is 0.1 to 5  $\mu\text{m}$ ; the maximum pore size in the transverse direction is 1 to 50  $\mu\text{m}$ ; and the ratio of the maximum pore size in the thickness direction / the maximum pore size in the transverse direction is from 1/2 to 1/20;

(b) in the cross section in the longitudinal direction: there are no lamella cross sections or fewer lamella cross sections than in the image of the cross section in the transverse direction; there are numerous pores (3); the maximum pore size in the thickness direction of the pores is 0.1 to 5  $\mu\text{m}$ ; the maximum pore size in the longitudinal direction is 1 to 50  $\mu\text{m}$ ; and the ratio

of the maximum pore size in the thickness direction / the maximum pore size in the longitudinal direction is from 1/2 to 1/20."

"7. A process for producing a successively biaxially stretched,  $\beta$ -crystal nucleating agent-containing polypropylene porous film according to claim 1, said process comprising a sequential biaxial stretching step which comprises extruding a melt of a polypropylene-based resin composition containing a  $\beta$ -crystal nucleating agent (11n, 11p) from a T-die, cooling the extrudate on a chill roll, and stretching the thus obtained  $\beta$ -crystal nucleating agent-containing polypropylene unstretched web sheet first longitudinally and then transversely, characterized in that the degree of orientation of  $\beta$ -crystals calculated from a pole figure of the crystal lattice (300) plane of the  $\beta$ -crystals determined by X-ray diffraction of the sheet obtained after longitudinal stretching is adjusted to less than 0.30 by carrying out the following Method (I) and/or Method (II):  
Method (I): melting a polypropylene-based resin composition consisting essentially of  
(i) the polypropylene-based resin (22),  
(ii) needle crystals (11 n) of at least one amide compound as the  $\beta$ -crystal nucleating agent, and if desired  
(iii) at least one polyolefin modifier  
at a temperature (T1) which is not lower than the melting point of the polypropylene-based resin (22) and lower than the temperature at which the needle crystals (11n) of the amide compound dissolve in the melt of the polypropylene-based resin (23), and extruding the molten polypropylene-based resin composition from the T-die in a state in which the amide compound needle

crystals (11n) are present, wherein said at least one amide compound is:

- (1) at least one member selected from the group consisting of N,N'-diphenylhexanediamide, N,N'-dicyclohexylterephthalamide and N,N'-dicyclohexyl-2,6-naphthalenedicarboxamide,
- (2) at least one member selected from the group consisting of N,N'-dicyclohexanecarbonyl-p-phenylenediamine, N,N'-dibenzoyl-1,5-diaminonaphthalene, N,N'-dibenzoyl-1,4-diaminocyclohexane and N,N'-dicyclohexanecarbonyl-1,4-diaminocyclohexane,
- (3) at least one member selected from the group consisting of N-cyclohexyl-4-(N-cyclohexanecarbonylamino)benzamide and N-phenyl-5-(N-benzoylamino)pentaneamide, or
- (4) a mixture of two or more members of the above amide compounds of (1) to (3)),

Method (II): adjusting the neck-in ratio during longitudinal stretching to at least 25% and not more than 55%."

- VIII. Compared with the main request, claim 1 of auxiliary request 1 is unamended. Independent claim 7 of auxiliary request 1 contains the following deletion in the passage relating to Method (I):

"melting a polypropylene-based resin composition consisting ~~essentially~~ of".

- IX. The submissions by appellant I may be summarised as follows:

*Sufficiency of disclosure*

Figures 2 and 4 of the patent disclosed the vertical lamella cross sections of claim 1. The skilled person



would interpret Figures 3A and 3B accordingly. Additionally, paragraph [0057] of the patent provided a teaching on how to count the number of vertical lamella. Hence, the disclosure in the patent was sufficient.

The opposition's decision not to admit late-filed document D11, on which document D11a was based, was correct. Moreover, document D11a was not relevant for the issue of sufficiency of disclosure.

*Main request - added subject-matter*

According to to decisions T 472/88 and T 975/94 the term "*comprising*" was by itself a sufficient basis for the terminology "*consisting essentially of*", in particular in view of the optional nature of component (iii). Moreover, the application as filed (cf. page 41, lines 10 to 16) disclosed a fourth component in the form of blending polymers. Therefore, the subject-matter of claim 7 did not go beyond the application as originally filed.

*Auxiliary request 1 - added subject-matter and extension of protection*

The passages on page 28, line 13 to page 30, line 9, page 62, lines 1 to 5, page 64, line 16 to page 65, line 12, page 67, lines 9 to 13 of the application as filed provided an implicit disclosure for the amended feature. Moreover, the term "*comprising*" was in itself a sufficient basis for the restriction to "*consisting of*". An explicit statement excluding the presence of any additional component was not required for the allowability of this amendment.

*Auxiliary request 1 - novelty and inventive step*

According to the invention (cf. paragraph [0130] of the patent), Method (I) required that the amide compound was melt mixed in the polypropylene-based resin at a temperature at which the amide compound homogeneously dissolved in the polypropylene-based resin so that needle crystals of the amide were obtained in the resin pellets after cooling and cutting. Because of the amount of amide compound of 0.2 weight parts and the melt mixing temperature of 240°C, the amide compound did not dissolve in the resin in document D3.

Accordingly, the process of document D3 for producing a porous polypropylene film was entirely different from Method (I) of the present patent. Document D3 did also not describe a process equivalent to Method (II). The subject-matter of claim 1 was therefore not inherently disclosed in document D3.

Moreover, document D3 could not render obvious the methods described in the patent in suit. In particular, document D3 described neither the dissolution of the amide compound in the polypropylene-based resin in the melt mixing step nor the adjustment of the neck-in ratio during longitudinal stretching to at least 25% and not more than 55%. The object was to provide a porous polypropylene film having improved thickness uniformity, high porosity and air permeability and electrical resistance required for a battery separator. In addition, it should be obtained at high strain rate without impairing breaking resistance. The effects of the invention had been demonstrated in the examples of the patent and possible explanations for the improvements had been given in the description of the patent (e.g. paragraphs [0048], [0049], [0056]). The subject-matter of the claimed invention was not

suggested by document D3 and therefore based on an inventive step.

X. Appellant II's submissions were essentially as follows:

*Sufficiency of disclosure*

In the patent in suit it was not explained, in particular not in connection with Figures 3A and 3B (cf. paragraphs [0055] and [0056] of the patent in suit), how and where the claimed lamella cross sections could be seen in the figures of the patent and what was meant by "*more lamella cross sections*" in claim 1. Figure 4 was merely schematic and therefore not suitable for interpreting Figures 3A and 3B or for explaining what the lamella cross sections looked like.

Additionally, the invention was insufficiently disclosed in view of the claimed film thickness uniformity. Document D11a contained experimental evidence in that respect and was filed in support of this objection, which had already been put forward during the opposition proceedings. Due to its late filing it had not been admitted then. However, at the appeal stage appellant II now had sufficient time to deal with this issue.

*Main request - added subject-matter*

The amended wording "*consisting essentially of*" in claim 7 was neither explicitly nor implicitly disclosed in the application as filed. The feature in question had to be interpreted as encompassing a resin composition consisting of the components (i) to (iii) and of an undefined fourth component, which did not materially affect the essential characteristics of the

resin composition. Since the original application did not contain such a fourth component different from components (i) to (iii), the subject-matter of claim 1 went beyond the content of the application as filed. The following distinction had to be made between *"containing"*, *"consisting of"* and *"consisting essentially of"*:

- (i) any further component could be present (*"containing"*),
- (ii) no further component could be present (*"consisting of"*)
- (iii) specific further components could be present, namely those not materially affecting the essential characteristics of the polypropylene-based resin composition (*"consisting essentially of"*).

This interpretation was in accordance with the established case law as explained in decision T 759/10. The opposition division's interpretation of and conclusion on the contested wording *"consisting essentially of"* was therefore correct.

*Auxiliary request 1 - added subject-matter and extension of protection*

The amendment of *"comprising"* to *"consisting of"* extended the scope of protection, contrary to the provisions of Article 123(3) EPC. Moreover, it was not originally disclosed, contrary to the requirements of Article 123(2) EPC.

*Auxiliary request 1 - novelty and inventive step*

The process for preparing the film of claim 1 was equivalent to the one known from examples 1, 2 and 7 of

document D3, in particular in view of the resin and the  $\beta$ -crystal nucleating agent used. The fact that the  $\beta$ -crystal nucleating agent did not dissolve in the process of document D3 was not relevant since according to the patent (cf. "contains needles" in paragraph [0129]; see also [0123] and [0135]) it was not excluded that the  $\beta$ -crystal nucleating agent could be present in a different form. Also the properties of the film of document D3 fell within the preferred ranges mentioned in the patent (cf. paragraphs [0078], [0080] and [0086]). The claimed maximum pore sizes and the number of lamella cross section were inherent features of the film of document D3. The subject-matter of claim 1 was thus implicitly disclosed.

As regards the question of inventive step, document D3 belonged to the same field as the claimed invention and formed the closest prior art.

The following features of claim 1 were not explicitly mentioned in document D3:

- thickness uniformity of 0.1 or less;
- maximum pore size in the longitudinal direction within the range of 1-50  $\mu\text{m}$ ;
- maximum pore size in the transverse direction within the range of 1-50  $\mu\text{m}$ ;
- maximum pore size in the thickness direction within the range of 0.1-5  $\mu\text{m}$ ; and
- more lamella cross sections in the image of the cross section in the transverse direction than in the image of the cross section in the longitudinal direction.

No evidence was provided by appellant I that the feature of the lamella cross sections was present in the films of examples A and 1 of the patent. Moreover, the claimed film did not show any advantages over the known film of document D3. Consequently, the problem to be solved was merely to provide an alternative film. If the features of the thickness uniformity, the lamella cross sections and the pore sizes were not already present in the film of document D3, it was an obvious alternative to modify the film accordingly; no advantages or effects were apparent in this regard. The subject-matter of claim 1 was thus obvious.

## **Reasons for the Decision**

### *1. Sufficiency of disclosure*

#### 1.1 First objection regarding the lamella cross sections

1.1.1 According to claim 1, the film has to have more lamella cross sections in the image of the cross section in the transverse direction than in the image of the cross section in the longitudinal direction. In that respect, appellant II essentially submits that it was not explained in the patent in suit what was meant by "*more lamella cross sections*" and where in Figures 3A and 3B these lamella cross sections could be seen.

1.1.2 In the judgement of the board, the contested features of granted claim 1 relating to the presence of lamella cross sections in the images of the film cross sections in the longitudinal and transverse directions are sufficiently disclosed in the patent as a whole. In particular, reference is made to Figure 4, which indicates the lamella cross sections with reference

number 2, and paragraphs [0056] to [0058] for a detailed explanation of the features in question. This comprehensive disclosure is not altered by the fact that the lamella cross sections are more difficult to recognise in pictures (A) and (B) of Figure 3. Consequently, taking into account the disclosure of the patent as a whole, the claimed features relating to the lamella cross sections in the images of the film cross sections in the transverse and the longitudinal directions are disclosed in a manner which is sufficient for the skilled person to carry out the invention.

- 1.2 Second objection regarding the film thickness uniformity and admissibility of document D11a
  - 1.2.1 In addition to the allegation of an insufficient disclosure regarding the lamella cross sections, appellant II submitted on 13 December 2012, i. e. approximately one month before the date of the oral proceedings before the opposition division, that the invention was insufficiently disclosed also in view of the claimed film thickness uniformity. This objection was said to be supported by document D11 containing experimental evidence in that respect. One day before the first-instance oral proceedings, appellant II admitted that the indication of one of the parameters of the experiment of document D11 was incorrect and requested a correction of document D11, which was finally not admitted by the opposition division.
  - 1.2.2 Under Article 114(2) EPC 1973 it is at the opposition division's discretion not to admit facts and evidence not submitted in due time. It is well established practice that in deciding whether or not to admit such late-filed facts and evidence, the criteria to be

considered by the opposition division include the state of the procedure, the reasons for the belated submission and its *prima facie* relevance (cf. Guidelines for Examination in the European Patent Office, November 2017, E-VI, 2). The discretionary power conferred by Article 114(2) EPC 1973 necessarily implies that the EPO department of first instance has a certain degree of freedom in exercising its power (cf. G 7/93, OJ EPO 1994, 775). A board of appeal should only overrule the way in which a department of first instance has exercised its discretion when deciding on a particular case if it concludes that it has done so according to the wrong principles, or without taking into account the right principles, or in an unreasonable way. This rule also applies with respect to the opposition division's decision on the admission of late-filed submissions. It is generally not the function of a board of appeal to review all the facts and circumstances of the case as if it were in the place of the department of first instance, in order to decide whether or not it would have exercised such discretion in the same way (cf. cases cited in Case Law of the Boards of Appeal of the European Patent Office, 8th Edition, 2016, IV.C.1.2.2 a)).

- 1.2.3 Turning to the present case, appellant II submitted the corrected content of document D11 (later referred to as D11a) one day before the oral proceedings before the opposition division. According to the impugned decision (cf. points 2.4 and 2.5 of the Reasons), the opposition division, when exercising its discretion under Article 114(2) EPC 1973, took into account that document D11/D11a related to a new fact in relation to Article 100(b) EPC 1973 and that it constituted experimental evidence, which had been filed at a very late stage of the opposition procedure. Considering these aspects in



combination, it came to the conclusion that "[t]he experiment results according to D11 have not been submitted sufficiently well in advance for the patent proprietor to have the opportunity to perform counter-experiments. The very late submission of D11 (filed one month before the oral proceedings, and corrected one day before the oral proceedings) is contrary to a fair and expedient procedure, because such a short period is insufficient to carry out counter-experiments. Therefore, document D11 is not admitted into the proceedings under Art. 114 (2) EPC as having been late-filed."

1.2.4 Hence, the opposition division based its discretionary decision not to admit document D11/D11a (and, by consequence, the underlying insufficiency objection regarding the film thickness uniformity) on well-established principles and did not act in an unreasonable way. Nor is this aspect challenged by appellant II. Under these circumstances, the board sees no reason to overrule the way in which the department of first instance exercised its discretion under Article 114(2) EPC 1973.

1.2.5 Together with its statement setting out the grounds of appeal, appellant II submitted document D11a in order to support its allegation that the feature relating to the film thickness uniformity rendered the disclosure of the invention in the contested patent insufficient. The admission or not of document D11a and the corresponding insufficiency objection regarding the film thickness uniformity is governed by Article 12(4) RPBA. Following this provision, the non-admission of facts and evidence, which were not admitted in the first instance proceedings, into the appeal proceedings is at the discretion of the board. In fact, the wording

of Article 12(4) RPBA puts facts and evidence that could have been submitted before the department of first instance but were not and facts and evidence that were submitted but were not admitted on an equal footing. Consequently, facts and evidence, which would have been admitted into appeal proceedings if they had been filed for the first time at the outset of those proceedings should not be held inadmissible for the sole reason that they were already filed before the department of first instance and not admitted then by a correct discretionary decision. Rather, the board has to exercise its discretion under Article 12(4) RPBA independently, giving due consideration to the appellant's additional submissions filed at appeal stage (cf. T 971/11, Reasons 1.2 and 1.3).

1.2.6 According to the established case law, the filing of new facts and evidence before the board of appeal is normally considered to be in due time, if it is occasioned by an argument or a point raised by another party and could not have been filed before under the circumstances of the case; a late filing can be justifiable if it is an appropriate and immediate reaction to developments in the previous proceedings. Hence, an appellant who has lost the opposition proceedings should be given the opportunity to fill the gaps in its arguments by presenting further evidence in this regard (cf. cases cited in Case Law of the Boards of Appeal of the European Patent Office, 8th Edition, 2016, IV.C.1.3.6 a)).

1.2.7 Applying these principles to the case at hand, it is first noted that no reasons have been presented for the late submission of the second insufficiency objection regarding the film thickness uniformity and related document D11a. In particular, it is not put forward or

apparent that this new filing is occasioned by an amendment in the claims or a point raised by the patent proprietor or the opposition division during the (final phase of the) first-instance proceedings and that it could not have been filed earlier. Moreover, the newly raised insufficiency objection does not fill gaps in a previous line of attack. Rather, the first and the second insufficiency objections concern different aspects of the subject-matter claimed and, hence, are independent of each other. Consequently, the second insufficiency objection constitutes a fresh case, the introduction of which is not justified by the course of the proceedings.

In the light of the above, the board concludes that the insufficiency objection regarding the film thickness uniformity and corresponding document D11a are inadmissible under Article 12(4) RPBA.

2. *Main request - added subject-matter*

2.1 The section referring to Method (I) in claim 7 as originally filed contains the following wording:

*"a polypropylene-based resin composition containing a polypropylene-based resin and needle crystals of an amide compound as a  $\beta$ -crystal nucleating agent"*

In claim 7 as granted, this passage is amended as follows:

*"a polypropylene-based resin composition consisting essentially of  
(i) the polypropylene-based resin (22),*

- (ii) *needle crystals (11n) of at least one amide compound as the  $\beta$ -crystal nucleating agent, and if desired*
- (iii) *at least one polyolefin modifier"*

2.2 It is undisputed that the wording "*consisting essentially of*" is not explicitly present in application as filed. Consequently, it has to be established whether or not the original application contains an implicit but unambiguous disclosure of these features.

Following the jurisprudence of the boards of appeal, the terminology "*consisting essentially of*" in claim 1 has a particular meaning and is to be understood in the sense that, apart from the components (i), (ii) and (iii) explicitly listed, only certain types and amounts of other components may be present in the resin composition that do not materially affect the essential characteristics of the composition (cf. for example T 472/88, Reasons 3 and T 759/10, Reasons 3.2). Already in view of this understanding, the board cannot endorse appellant I's argument that, in accordance with decision T 472/88, the original term "*comprising*" did, in itself, provide a sufficient basis for the amended wording "*consisting essentially of*". Moreover, it has to be taken into account that in the light of the Enlarged Board's jurisprudence in cases G 2/98 (OJ EPO 2001, 413) and G 1/03 (OJ EPO 2004, 413), which established the criterion of a direct and unambiguous disclosure, the case law of the boards of appeal on added subject-matter has developed further and that today it is settled that the term "*comprising*" is not generally accepted as a direct and unambiguous basis for an amendment to "*consisting essentially of*" (for a comprehensive summary of the development of the boards'

case law on this issue see decision T 759/10, Reasons 5).

As an alternative line of argument, appellant I puts forward that the application as filed (cf. page 41, lines 10 to 16), in fact, disclosed not only the explicitly claimed components (i) to (iii), but also a fourth component in the form of blending polymers, which justified the wording "*consisting essentially of*" as interpreted by the boards of appeal. In this regard, the board observes that according to the generally accepted understanding of the wording "*consisting essentially of*", the possible fourth or further unnamed components must not materially affect the essential characteristics of the polypropylene-based resin composition. This criterion is not fulfilled even if the blending polymers were considered a fourth component, since it is exactly the purpose of blending polymers to alter the characteristics of the resin composition. Consequently, the board endorses not only the opposition division's finding that the original application does not contain a fourth component different from components (i) to (iii), which does not materially affect the essential characteristics of the polypropylene-based resin composition, but also its conclusion that a direct and unambiguous basis for the amended wording "*consisting essentially of*" is not apparent in the original application.

For these reasons, the subject-matter of claim 7 of the main request goes beyond the content of the application as filed, Article 100(c) EPC 1973.

3. *Auxiliary request 1 - added subject-matter and extension of protection*

3.1 The passage referring to method (I) in claim 7 as originally filed contains the following wording:

*"a polypropylene-based resin composition containing a polypropylene-based resin and needle crystals of an amide compound as a  $\beta$ -crystal nucleating agent"*

In claim 7 according to auxiliary request 1, this feature reads as follows:

*"a polypropylene-based resin composition consisting of (i) the polypropylene-based resin (22), (ii) needle crystals (11n) of at least one amide compound as the  $\beta$ -crystal nucleating agent, and if desired (iii) at least one polyolefin modifier"*

3.2 The contested amendment relates to the composition in Method (I) of claim 7 and contains, in fact, two modifications:

- the term *"comprising"* was replaced by the wording *"consisting of"*,

- at least one polyolefin modifier was added as optional component (iii).

Consequently, the amended feature is limited to a composition consisting of components (i) and (ii) or, alternatively, of components (i), (ii) and (iii). The parties are in agreement that the amended feature has no explicit basis in the original application. The

dispute hinges in particular on the question of whether or not a composition consisting (exclusively) of components (i), (ii) and optionally (iii) - is implicitly, but directly and unambiguously disclosed in the application as filed.

3.3 In that respect, it is noted that in the application as filed the polypropylene-based resin composition is generally disclosed as containing only a polypropylene-based resin (component (i)) and needle crystals of at least one amide compound (component (ii)). Reference is made to original claim 7 and the description, page 14, lines 15 to 17, page 20, lines 13 to 19, page 28, line 13 to 16, page 29, line 22 to page 30, line 9, page 31, lines 17 to 21, page 64, line 20 to page 65, line 12. The possibility of further adding a polyolefin modifier (component (iii)) is mentioned as an option which may be used if needed (page 62, line 1 to page 63, line 8, page 67, lines 9 to 13, example A on page 90). As already stated above in the context of the main request, the original application does not contain any indication that, in addition to components (i), (ii) and optionally (iii), a fourth component could be present in the polypropylene-based resin composition. Consequently, the contested feature referring a polypropylene-based resin composition consisting of (i) the polypropylene-based resin, (ii) needle crystals of at least one amide compound and, if desired, (iii) at least one polyolefin modifier correctly reflects the overall disclosure of the original application as understood by the skilled person. For these reasons, the subject-matter of claim 7 of auxiliary request 1 does not go beyond the content of the application as filed.

3.4 Furthermore, in comparison with the granted version, claim 7 of auxiliary request 1 is restricted by deleting the word "essentially", thereby excluding the presence of a fourth component.

3.5 For these reasons, claim 7 according to auxiliary request 1 meets the requirements of Article 123(2) and (3) EPC.

4. *Auxiliary request 1 - novelty and inventive step*

4.1 Document D3 is the only reference cited by appellant II against the novelty and inventive step of the subject-matter claimed. The board observes that document D3 claims a priority of 2 June 2000. It has been published as WO 01/092386 on 6 December 2001, which is between the two priority dates of the opposed patent (21 February 2001 and 28 December 2001). However, the claimed numerical ranges for the pore sizes of claim 1 (and the underlying process of method (I)) have, as such, been fully disclosed only in the later of these two priority applications, which was filed after the publication date of document D3. In view of that, the following assessment of novelty and inventive step of claim 1 is based on the uncontested presumption that document D3 forms part of the state of the art according to Article 54(2) EPC 1973 for the subject-matter of claim 1.

4.2 As to the substance, it is common ground between the parties that the claimed film including the features of the thickness uniformity, the maximum pore sizes and the numbers of lamella visible in the film cross sections is not explicitly disclosed in document D3. Regarding a possible implicit disclosure, it is undisputed that the parameters of the process known



from document D3 do not lead to a dissolution of the amide compound in the resin, which is required for the formation of needle crystals. Moreover, no (experimental) evidence was provided in order to prove that the film obtained by the method of document D3 had all the claimed structural features of contested claim 1.

4.3 In view of these considerations, the subject-matter of claim 1 of auxiliary request 1 cannot be regarded as being inherently anticipated by the film obtained by the process of document D3. Novelty has therefore to be acknowledged, Article 54(2) EPC 1973.

4.4 Turning to the issue of inventive step, the subject-matter of claim 1 differs from the film of document D3 in the following features:

- thickness uniformity of 0.1 or less;
- maximum pore size in the longitudinal direction within the range of 1-50  $\mu\text{m}$ ;
- maximum pore size in the transverse direction within the range of 1-50  $\mu\text{m}$ ;
- maximum pore size in the thickness direction within the range of 0.1-5 $\mu\text{m}$ ; and
- more lamella cross sections in the image of the cross section in the transverse direction than in the image of the cross section in the longitudinal direction.

4.5 According to the patent in suit (cf. paragraphs [0014] and [0015], the technical problem to be solved is to provide a porous polypropylene film having improved

thickness uniformity, high porosity and air permeability and electrical resistance required for a battery separator. In addition, it should be obtained at high strain rate without impairing breaking resistance.

- 4.6 No reasoning has been provided as to why the skilled person should be motivated to modify the film of document D3 as regards the disputed features of the thickness uniformity, the maximum pore size and the numbers of lamella visible in the film cross sections. It also is not evident from document D3 or the common general knowledge which changes to the process of document D3 would be required in order to arrive at a film with the claimed properties. In view of that, appellant II's conclusions are based on an *ex-post facto* analysis.
- 4.7 Consequently, the documents and arguments on file are not, from an objective point of view, suitable for rendering obvious the subject-matter of claim 1 of auxiliary request 1. It is therefore based on inventive step (Article 56 EPC 1973).
- 4.8 The same applies for the subject-matter of independent claim 7, the novelty or inventive step of which was not challenged in substance.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent with the following claims and a description and drawings to be adapted:

#### Claims:

Nos. 1 to 12 of Auxiliary Request 1 filed under cover of a letter dated 26 July 2013.

The Registrar:

The Chairman:



N. Schneider

M. Poock

Decision electronically authenticated