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**Datasheet for the decision  
of 18 October 2011**

**Case Number:** T 1836/09 - 3.3.09

**Application Number:** 99119916.7

**Publication Number:** 992339

**IPC:** B32B 27/32, C08L 23/08,  
C08L 23/04, C08J 5/18

**Language of the proceedings:** EN

**Title of invention:**  
Puncture resistant polymeric films, blends and process

**Patentee:**  
Curwood, Inc.

**Opponent:**  
LUDWIG, Gabriele

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 54, 56, 83, 123(2)  
RPBA R. 13(3)

**Keyword:**  
"Main request: inventive step (no)"  
"Auxiliary request: inventive step (no)"  
"Second auxiliary request: not admitted into the proceedings"

**Decisions cited:**  
T 0012/81, T 0860/00

**Catchword:**  
-



Case Number: T 1836/09 - 3.3.09

**DECISION**  
of the Technical Board of Appeal 3.3.09  
of 18 October 2011

**Appellant:** Curwood, Inc.  
(Patent Proprietor) 2200 Badger Avenue  
Oshkosh, WI 54903 (US)

**Representative:** Hoeger, Stellrecht & Partner Patentanwälte  
Uhlandstrasse 14c  
D-70182 Stuttgart (DE)

**Respondent:** LUDWIG, Gabriele  
(Opponent) Nadistrasse 10  
D-80809 München (DE)

**Representative:** Sandmann, Wolfgang  
Reinhard, Skuhra, Weise & Partner GbR  
Patent- und Rechtsanwälte  
Friedrichstrasse 31  
D-80801 München (DE)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 9 July 2009  
revoking European patent No. 992339 pursuant to  
Article 101(2) and 101(3)(b) EPC.

**Composition of the Board:**

**Chairman:** W. Sieber  
**Members:** N. Perakis  
R. Menapace

## Summary of Facts and Submissions

I. Mention of the grant of European patent No 0 992 339 in respect of European patent application No 99119916.7, which had been filed in the name of Curwood, Inc. on 8 October 1999, was published on 7 June 2006 (Bulletin 2006/23). The patent was granted with 89 claims.

Claim 1 reads as follows:

"1. A flexible biaxially stretched, heat shrinkable polymeric film having at least one layer comprising a blend of at least three polymers comprising:

20 to 85 weight percent of a first polymer having a melting point of 80 to 98°C comprising at least one copolymer of ethylene and hexene-1;

5 to 35 weight percent of a second polymer having a melting point of 115 to 128°C comprising at least one copolymer of ethylene and at least one  $\alpha$ -olefin; and

10 to 50 weight percent of a third polymer having a melting point of 60 to 110°C comprising at least one copolymer of ethylene and a vinyl ester, an alkyl acrylate, acrylic acid, or methacrylic acid; wherein said first and second polymers have a combined weight percentage of at least 50 weight percent, said weight percentage being based upon the total weight of said first, second and third polymers."

II. An opposition was filed by Gabriele Ludwig requesting revocation of the patent in its entirety on the grounds that the claimed subject-matter was neither novel nor inventive (Article 100(a) EPC).

Together with the notice of opposition, the opponent filed *inter alia* the following documents:

E1: WO 98/38035 A1; and

E4: EP 0 801 096 A1.

- III. With a letter received on 20 May 2009 the patent proprietor filed an auxiliary request. In Claim 1 of this request the first copolymer has been further limited as "comprising at least one **b**ipolymer of ethylene and hexene-1" (emphasis added).
- IV. By its decision announced orally on 25 June 2009 and issued in writing on 9 July 2009, the opposition division revoked the European patent. The opposition division considered that:
- the subject-matter of Claim 1 as granted (main request) lacked novelty in view of the disclosure of E1 (Example 7) and
  - the subject-matter of Claim 1 of the auxiliary request lacked an inventive step in view of E1.
- V. The patent proprietor (appellant) filed an appeal against the decision of the opposition division on 9 September 2009 and paid the appeal fee on the same day.

Together with the statement setting out the grounds of appeal, the appellant filed on 19 November 2009 a new main request (Claims 1-88) and a new auxiliary request (Claims 1-80).

Claim 1 of the main request corresponded to Claim 1 as granted with the following amendment (in bold):

"20 to 85 weight percent of a first polymer having a melting point of 80 to **92°C** comprising at least one copolymer of ethylene and hexene-1".

Claim 1 of the auxiliary request corresponded to Claim 1 as granted with the following amendments (in bold):

"**45** to 85 weight percent of a first polymer having a melting point of 80 to **92°C** comprising at least one copolymer of ethylene and hexene-1;"

VI. By letter dated 1 April 2010 the respondent (opponent) raised objections against the patentability of the new requests with regard to novelty and inventive step.

VII. In an official communication faxed on 10 October 2011 the board expressed its concerns regarding the disclosure of the subject-matter of the amended claims in the originally filed application.

VIII. On 18 October 2011 oral proceedings were held before the board, during which the appellant filed a further (second) auxiliary request. Claim 1 of the second auxiliary request corresponds to Claim 1 as granted with the following amendments:

"1. A flexible biaxially stretched, heat shrinkable polymeric film having at least one layer comprising a blend of ~~at least~~ three polymers ~~comprising~~ **consisting of:** ...".

The respondent contested the admissibility of this late-filed request and argued that the amendments did not limit the subject-matter of Claim 1 of the second auxiliary request over that of the main request. The board also expressed its concerns regarding the admissibility of the second auxiliary request as it appeared to generate a fresh case. In fact, the patentability of the subject-matter of the second auxiliary request would have to be examined in the light of all the documents cited in the notice of opposition. So far, only document E1 had been dealt with in the appeal proceedings.

IX. The relevant arguments put forward by the appellant in its written submissions and at the oral proceedings may be summarised as follows:

- Claim 1 of the main request fulfilled the requirements of Article 123(2) EPC. It was admitted that the application as filed did not explicitly disclose the melting point of the first polymer of the blend, which ranged between 80 and 92°C, in combination with the other claimed features. The skilled person would, however, directly and unambiguously derive this combination from the content of the originally filed application as a whole. In fact the application as originally filed disclosed a first polymer with a general and a preferred melting point range, the latter being 80 to 92°C (page 18, lines 10-11). In the absence of any contradictory disclosure concerning the preferred melting point range in the original document, it was reasonable to assume

that the skilled reader would understand that this preferred range was applicable to the first polymer wherever disclosed in the application as originally filed and thus in combination with all the other features of Claim 1.

- A similar reasoning applied to the feature concerning the 45-85 wt% of the first polymer according to the auxiliary request and to its combination with the preferred melting point range. Thus, Claim 1 of the auxiliary request should also be considered to fulfil the requirements of Article 123(2) EPC.
  
- Claim 1 of the main request was novel not only over the specific Example 7 of E1, but also over the general disclosure of this document. Thus a multiple selection from several lists/ranges had to be made in order to arrive at the claimed subject-matter. Nevertheless, nothing in E1 hinted at the claimed selections and therefore the claimed subject-matter had to be considered novel.
  
- Claim 1 of the main request was not obvious in the light of E1 and therefore involved an inventive step. The reduction of the melting point of the first polymer of E1 (cf. Example 7) from the disclosed 94°C to between 80 and 92°C according to Claim 1 provided films with unexpectedly good heat sealing and puncture resistance properties. This unexpected effect was illustrated in the opposed patent by the comparison of Examples 16 and 17 with Comparative Example 18. The latter was considered to correspond to Example 7 of E1.

- Claim 1 of the auxiliary request was also novel over E1 as its subject-matter was further distinguished from the disclosure of E1 by the additional feature of the weight percent of the first polymer (45-85 wt% as claimed instead of 29.1 wt% as disclosed).
  
- The different technical features of Claim 1 of the auxiliary request over Example 7 of E1 (the melting point and the weight percent of the first polymer) were not obvious to the skilled person since they contributed to the unexpected improvement of the film's puncture resistance and to the reduction of its tear strength. This was illustrated by comparison of Example 17, an example according to the auxiliary request, with Comparative Example 18, an example very similar to Example 7 of E1. Additionally, the comparison of Example 16 (not according to the auxiliary request) with Example 17 (according to the auxiliary request) illustrated an unexpected significant improvement of the ram puncture property for the film of Example 17 (according to the auxiliary request). As the skilled person would find no hint in E1 as to what modification he had to make in order to improve the properties of the film, Claim 1 of the auxiliary request should be considered to involve an inventive step.
  
- The second auxiliary request was filed as a reaction to the respondent's interpretation regarding the composition of the polymeric film of Claim 1 of the main and the auxiliary requests.



Surprisingly, this interpretation had been accepted by the board. Claim 1 of the second auxiliary request concerned a polymeric film having at least one layer which comprised a blend of three specific polymers. This was an easy amendment and the resulting subject-matter was clear. Furthermore this amendment did not raise new matter but focused on the same technical problem of the hierarchically higher requests and did not require that another document be considered as the closest state of the art. This request should therefore be admitted into the proceedings.

X. The relevant arguments put forward by the respondent in its written submissions and at the oral proceedings may be summarised as follows:

- Claim 1 of the main and the auxiliary requests did not fulfil the requirements of Article 123(2) EPC. Although each feature of these claims was disclosed in the application as originally filed, the claimed specific combination was not.
- Claim 1 of the main request, though novel over Example 7 of E1, was not novel over the general disclosure of this document.
- Claim 1 of the main request did not involve an inventive step. E1, example 7, should be considered to represent the closest state of the art which, as acknowledged, disclosed a melting point for the first polymer of the polymer blend which was higher by 2°C compared with the upper

value of the melting point range of the first polymer of the claimed polymer blend. The reduction, however, of the melting point by 2°C in the claimed subject-matter was not shown to solve the technical problem of combined puncture resistance increase with tear strength reduction. In fact, the patent in suit did not compare a film according to Claim 1 with the film of Example 7 of E1, the closest state of the art. Therefore the patent (also the file) did not contain the necessary technical proof for the alleged effects. The consequence was that the reduction of the melting point of the prior art first polymer by 2°C in order to arrive at the first polymer of the claimed film was an arbitrary modification covered by the disclosure of E1 and obvious to the person skilled in the art in the performance of his ordinary tasks.

- Nor did Claim 1 of the auxiliary request involve an inventive step. The additional technical limitation of this claim over Example 7 of E1 related to the weight percent of the first polymer in the polymeric blend (45-85 wt% as claimed instead of 29.1 wt% as disclosed). However, the patent in suit did not contain any technical evidence comparing the claimed film with that of Example 7 of E1, the closest state of the art. Therefore there was no technical basis substantiating an effect or advantage resulting from the claimed combination of a specific melting point and a specific weight percent of the first polymer of the film. These modifications were

arbitrary, covered by the disclosure of E1 and thus obvious to the skilled person in the art.

- The second auxiliary request should not be admitted into the procedure. It was filed only during the oral proceedings before the board, i.e. at a very late stage of the procedure. Furthermore, the subject-matter of Claim 1 of the second auxiliary request did not seem to differ from that of Claim 1 of the main request and was therefore redundant. Finally, even if it were considered different, then its wording had to be considered to lack clarity, since it was not clear what feature distinguished it over Claim 1 of the main request.

XI. The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained on the basis of Claims 1 to 88 (main request) or Claims 1 to 80 (auxiliary request), both requests filed on 19 November 2009, or on the basis of the set of Claims 1 to 88, filed during the oral proceedings as a second auxiliary request.

The respondent (opponent) requested that the second auxiliary request be not allowed into the proceedings and that the appeal be dismissed.

## **Reasons for the Decision**

1. The appeal is admissible.

**Main request**

2. Amendments under Article 123(2) EPC

2.1 The subject-matter of Claim 1 of the main request differs from Claim 1 as granted in that the melting point range for the first polymer has been amended from 80 to 98°C to 80 to 92°C.

The respondent argued that the new range of 80 to 92°C had not been disclosed in the application as filed in combination with the other features of Claim 1 as granted.

2.2 However, it is apparent from the original application as a whole that a melting point range of 80 to 92°C for the first polymer is a generally preferred range. Thus, the passage on page 11, lines 11-12, under the heading "SUMMARY OF THE INVENTION", discloses that: "In various embodiments the inventive film comprises a blend including: (a) a first polymer having a melting point of 80-98°C, **preferably 80-92°C**, comprising a copolymer of ethylene and hexene-1; ..." (emphasis added).

Further, when it comes to describing the first polymer in detail, it is mentioned on page 18, lines 10-11, that: "The first polymer of the preferred film blend has a melting point of 80 to 98°C, **preferably 80 to 92°C**, and comprises an ethylene hexene-1 copolymer" (emphasis added).

The board concurs with the appellant that the skilled person considering the application as filed as a whole (following the consistent case law of the boards of

appeal of the EPO; cf. T 860/00) would directly and unambiguously infer from this document that the melting point range of 80-92°C of the first polymer is implicitly included as the preferred range for the first polymer wherever it is mentioned in the original document. This applies also to the embodiment of Claim 1 as granted, which is derivable from a combination of Claim 1 as filed with the embodiment disclosed in the paragraph bridging pages 22 and 23 of the application as filed.

2.3 Consequently, the further limitation of the melting point of the first polymer by the preferred range of 80-92°C, which leads to the subject-matter of Claim 1 of the main request, fulfils the requirements of Article 123(2) EPC.

3. Novelty under Article 54(1) and (2) EPC

3.1 Document E1, and in particular Example 7, has been cited to anticipate the film of Claim 1 of the main request. Example 7 (page 35, lines 4-20, to be read together with the disclosure on page 30, line 11, to page 31, line 4, as Example 7 refers back to the formulation of Example 2) discloses a biaxially stretched, heat-shrinkable three-layer coextruded film whose flexibility (in the sense of Claim 1) has not been contested. The first layer comprises, amongst other components, a blend of:

- about 29.1 wt% of a polymer identified as Exact™ 3032\* which is stated to be a terpolymer of ethylene, hexene-1 and butene-1 having the following properties: a density of 0.902 g/cm<sup>3</sup>; a melt index

of 1.2; a melting point of 94°C; a Vicat softening point of 79°C and a  $M_w/M_n < 2.5$  [apart from the melting point, this polymer falls within the definition of the first polymer of the polymeric blend according to Claim 1; in this context the board notes that the more general term "copolymer" covers a "terpolymer"; this is also apparent from paragraph [0135] of the patent in suit, which states that a polymer containing ethylene, hexene-1 and butene-1 is a copolymer];

*\* The board agrees with the appellant that the designation Exact™ 3032 in E1 is actually erroneous and should read Exact™ 3033. According to paragraph [0135] of the patent specification Exact™ 3033 is a terpolymer of ethylene, hexene-1 and butene-1 having a density of 0.902 g/cm<sup>3</sup> and a melting point of 94°C, whereas Exact™ 3032 is a biopolymer of ethylene with hexene-1 having a density of 0.901 g/cm<sup>3</sup> and a melting point of 96°C (see [0124] of the opposed patent).*

- about 19.2 wt% of a polymer comprising an ethylene- $\alpha$ -olefin copolymer having a melting point of about 122°C (this copolymer falling within the definition of the second polymer of the polymeric blend according to Claim 1); and
- about 19.3 wt% of a polymer comprising a copolymer of ethylene and vinyl acetate (EVA) having a melting point of about 97°C (this polymer falling within the definition of the third polymer of the polymeric blend according to Claim 1),
- whereby the combined weight percentage of the polymers corresponding to the first and second polymers of Claim 1 is about 71 wt%, based on the

total weight of the first, second and third polymers (Claim 1 requiring a weight percentage of at least 50 wt%).

It is apparent from this detailed analysis of Example 7 of E1 that the appellant has overcome the lack of novelty objection of the appealed decision by restricting in Claim 1 of the main request the melting point range of the first polymer to 80-92°C. The respondent has also conceded that Example 7 of E1 no longer anticipates the claimed film.

- 3.2 The respondent has, however, argued that the film of Claim 1 lacked novelty in view of the general disclosure of E1. E1 discloses a polymeric blend and multilayer films having at least one layer comprising said blend. The polymeric blend comprises, amongst other components, polymers which correspond to the first, second and third polymers according to the main request.

However, the board does not concur with the respondent's view because the claimed film could be derived from the general disclosure of E1 only after multiple selections from the general disclosure of E1, as is explained below.

- 3.2.1 The polymer of the polymeric blend of E1 which corresponds to the first polymer of Claim 1 has a melting point ranging between 85 to 110°C (actually the second polymer in the terminology of E1; Claim 1, page 13, lines 16-17) and thus partially overlaps with the claimed melting point of 80-92°C of the first polymer. Furthermore, the polymer comprises a copolymer

of ethylene with at least one  $\alpha$ -olefin. Examples of suitable copolymers include copolymers of ethylene with at least one C<sub>3</sub> to C<sub>10</sub>  $\alpha$ -olefin, whereby an ethylene hexene-1 copolymer is disclosed as one example among others (page 13, lines 16-22). Thus, in order to arrive at the first polymer of Claim 1 of the main request one would have to select from the general disclosure of E1 the appropriate melting point range and hexene-1 as the comonomer. However, there is no indication of this specific combination in E1. In fact, such a combination would constitute an arbitrary individualisation from the general context of E1, which cannot be considered to be part of the disclosure of that document. This is in accordance with the case law of the boards of appeal of the EPO, according to which a specific combination of elements requiring the selection of elements from two known groups/lists cannot be regarded as disclosed in the art and so fulfils the novelty requirement (cf. T 12/81, point 13 of the reasons, OJ EPO, 1982, 296). Thus the features defining the first polymer as claimed cannot be considered as directly and unambiguously derivable from the general disclosure of E1.

3.2.2 Additionally, the polymeric blend of E1 comprises 10 to 40 wt% of a polymer (the third polymer in the terminology of E1) having a melting point of between 115 and 130°C, which corresponds to the second polymer of Claim 1. Although the weight percent (10 to 40 wt% vs 5 to 35 wt%) and the melting point range (115 to 130°C vs 115 to 128°C) of the polymer of E1 undeniably overlap with those of the second polymer of Claim 1 to a large extent, this does not mean that the skilled person would necessarily consider working within the



overlapping area in combination with the other specific polymers of E1.

3.2.3 Finally, the polymer blend of E1 does not necessarily contain the polymer corresponding to the third polymer of Claim 1. This polymer is disclosed in E1 as an **optional** fourth polymer, although one could argue, in view of the disclosure of E1, that the presence of this polymer is nevertheless preferred ("optionally and preferably a fourth polymer": page 10, lines 1-4; "The optional and preferred fourth polymer": page 15, lines 14-15).

3.2.4 Under these circumstances the board concludes that, in view of the general disclosure of E1, the skilled person would need to make several selections concerning the relevant polymers, at least those explained in points 3.2.1 and 3.2.2 above, in order to arrive at the blend of Claim 1. There is no clear guidance in the general disclosure of E1 pointing to these selections. Nor has the respondent identified anything hinting at these selections in the general disclosure of E1.

3.2.5 In sum, the subject-matter of Claim 1 of the main request is also novel over the general disclosure of E1.

4. Inventive step under Article 56 EPC

4.1 The invention relates to thermoplastic C<sub>2</sub>- $\alpha$ -olefin copolymer resin blends and flexible films having heat sealing and/or puncture resistance properties (paragraph [0001] of the patent specification). An almost identical introductory phrase can be found on page 1, lines 8-9, of E1. Thus, the board considers

that E1 represents the closest state of the art, and in particular the film of Example 7 of E1, which differs from the claimed film only in the melting point of the first polymer.

4.2 The appellant has argued that the technical problem to be solved over E1 is the provision of a film with improved puncture resistance and lower tear propagation strength (patent in suit, paragraph [0038]). In this context it argued that the experimental part of the patent in suit, in particular the comparison of Examples 16 and 17 (according to the invention) with Comparative Example 18 (corresponding to Example 7 of E1) illustrates that the technical problem has effectively been solved.

4.2.1 However, Comparative Example 18 of the patent in suit is quite different from Example 7 of E1. As can be seen from the comparison between the two examples below, the weight percentage of each respective constituent is different, the respective fourth polymer is quite different, and different additives are used. Thus, Comparative Example 18 cannot be considered to represent the closest state of the art.

Blend of polymers (as numbered in Claim 1)	Example 7 of E1	Comparative Example 18 of the patent in suit
first polymer	29.1 wt% ethylene hexene-1 and butene-1 m.p. 94°C (Exact™ 3033*)	17.0 wt% ethylene hexene-1 and butene-1 m.p. 94°C (Exact™ 3033)
second polymer	about 19.2 wt% ethylene octene-1 m.p. about 122°C (Attane™ XU 61509.32)	17.0 wt% ethylene octene-1 m.p. 122-123°C (Attane™ XU 61520.01)
third polymer	19.3 wt% ethylene vinyl acetate m.p. 97°C (Escorene™ LD 701.06)	28.1 wt% ethylene vinyl acetate m.p. about 97°C (Escorene™ LD 701.06)
fourth polymer	about 24 wt% ethylene butene-1 m.p. 68°C (Tafmer™ A0585 X)	33.9 wt% ethylene butene-1 m.p. 94°C (Exact™ 4011)
additives	4 wt% Ampacet 500301 (processing aid) and 4.4 wt% Ampacet 100031 (processing aid)	4 wt% Ampacet 100594 (processing aid)

\* See the explanations given in point 3.1 above.

In view of all these differences the argument of the appellant that the ram puncture and tear strength values from Comparative Example 18 could also be attributed to Example 7 of E1 must fail. The board

merely observes that the patent in suit does not contain any comparison between the film according to Claim 1 and the film of E1. Such a comparison would be necessary to substantiate the alleged improvement. Nor has the appellant ever submitted any technical evidence in support of such an improvement.

4.2.2 If, *arguendo*, it were accepted that the film of Comparative Example 18 essentially corresponded to Example 7 of E1 (and that the properties reported in Table 6 of the patent specification for Comparative Example 18 could be attributed also to the film of Example 7 of E1), the technical evidence in the patent in suit would still be insufficient and would not allow any conclusion to be drawn regarding the solution of the set technical problem. The board notes that the films of Examples 16 and 17 (according to the claimed invention) differ from that of the state of the art (Comparative Example 18) not only in the melting point of the first polymer of the polymeric blend: the films of Examples 16 and 17 comprise a layer with a polymeric blend which does not contain the fourth polymer of Example 18; the first polymer is a bipolymer (ethylene hexene-1) and not a terpolymer; and the weight percentages of components differ substantially. Given all these differences, it cannot be accepted that the alleged improvements, as illustrated by the technical data of Table 6, would unambiguously result from the mere reduction of the melting point of the first polymer of the polymeric blend. Hence, even from this standpoint the appellant's argument, namely that there is evidence in the patent in suit that the technical problem relating to an improvement over E1 has been plausibly solved, is not convincing.

4.3 Since there is no evidence on file that the alleged technical problem relating to an improvement over E1 has been plausibly solved, the objective technical problem has to be reformulated in a less ambitious way. Under the present circumstances the objective technical problem is considered to be the provision of a film serving as an alternative to the film disclosed by Example 7 of E1.

4.4 The means which lead to the solution of the objective technical problem as claimed amount to the reduction of the disclosed melting point of the first polymer from 94°C to a range between 80 and 92°C.

4.5 The question which remains to be answered is whether the skilled person starting from the disclosure of E1 (Example 7) and aiming to provide an alternative film would consider it obvious to reduce the melting point of the first polymer as now required by the subject-matter of Claim 1.

The board notes that E1 (page 9, lines 26-27; page 13, lines 16-17) discloses that the melting point of this polymer lies between 85 and 110°C. This gives the skilled person a clear indication that the melting point should also be varied within the overlapping range of 85-92°C in order to obtain a film with a broad spectrum of properties useful in packaging. In view of this teaching the skilled person in the field of polymeric films, particularly those useful for packaging, would, in the course of his routine activity, consider it obvious to vary the melting point of the first polymer within the range of 85-92°C with a

reasonable expectation of success, i.e. without any risk of jeopardising the useful properties of the film. Therefore he would arrive at the claimed film without any technical ingenuity. On the basis of the above considerations the board concludes that the claimed subject-matter is obvious to the skilled person and Claim 1 of the main request does not involve an inventive step.

***Auxiliary request***

5. Claim 1 of the auxiliary request differs from Claim 1 of the main request in that it contains a further limitation regarding the weight percent of the first polymer in the polymeric blend, which has been restricted to 45 to 85 wt%.

5.1 In Example 7 of E1 29.1 wt% of the polymer corresponding to the claimed first polymer is used. The general disclosure of E1, in particular page 14, lines 7-10, discloses that the weight percentage of this polymer in the blend is at least 10 wt% and preferably from about 30 to 70 wt%.

As the subject-matter of Claim 1 of the main request has been found to be novel over both the specific and the general disclosure of E1 (see point 3 above), the subject-matter of Claim 1 of the auxiliary request must be considered novel too, since it is narrower in scope than that of Claim 1 of the main request.

5.2 Regarding the issue of inventive step the board still considers E1, and in particular Example 7, to represent the closest state of the art. However, the deficiency

pointed out in the context of the main request, namely that there is no evidence on file showing an improvement of the claimed film over the closest state of the art, also applies to the film of Claim 1 of the auxiliary request. Under these circumstances the objective technical problem has to be reformulated as being to provide an alternative to the film of Example 7 of E1.

The solution to this problem amounts (i) to the reduction of the melting point of the first polymer of Example 7 of E1 from 94°C to a range between 80 and 92°C and (ii) to the increase of the weight percent of this polymer from the disclosed 29.1 wt% to a range between 45 and 85 wt%.

- 5.3 The question which remains to be answered is whether the skilled person starting from the disclosure of Example 7 of E1 and aiming to provide an alternative film would consider it obvious to reduce the melting point of the first polymer and increase its wt% in the polymeric blend as is required by the subject-matter of Claim 1.

As already pointed out in the context of the main request, E1 (page 9, lines 26-27; page 13, lines 16-17) discloses that the melting point of this polymer ranges between 85 and 110°C. This is a clear indication for the skilled person that he can vary the melting point within that range and obtain a film with a broad spectrum of properties useful in packaging. The board also notes that E1 (page 14, lines 7-10) discloses that the weight percentage of this polymer in the polymeric blend is of at least 10 wt%, and preferably from about

30 to 70 wt%. Thus, there is also a clear indication in E1 itself that the weight percentage of this polymer should be increased. Therefore the skilled person in the field of polymeric films particularly useful for packaging would, on the basis of the disclosure of E1, have reason in the performance of his ordinary tasks to vary, on the one hand, the melting point of the first polymer at least within the range of 85 to 92°C (the overlapping range with E1) and, on the other, the weight percentage of this polymer in the polymeric blend within the range of 45-85 wt%, without expecting any risk of jeopardising the useful properties of the film. Therefore he would arrive at a film falling within the scope of Claim 1 of the auxiliary request without applying any inventive skill. In view of the above considerations the board concludes that the subject-matter of Claim 1 of the auxiliary request does not involve an inventive step.

- 5.4 As a consequence the auxiliary request is not patentable and it is not necessary to elaborate on the issue of amendments under Article 123(2) EPC raised by the respondent.

***Second auxiliary request***

6. This request was filed during the oral proceedings before the board, i.e. at a very late stage of the proceedings. Claim 1 of this request now refers to a polymeric film "having at least one layer comprising a blend of three polymers consisting of" the first, second and third polymers as set out in Claim 1 as granted.



6.1 The appellant argued that this request was filed as a reaction to the interpretation of Claim 1 of the main request and the auxiliary request to mean that the polymeric blend could comprise a further polymer. The appellant maintains that it became aware of this interpretation only during the discussion at the oral proceedings.

The board does not accept this argument because the expression "a blend of at least three polymers comprising" used in Claim 1 of the main request and the auxiliary request undoubtedly leaves room for a further polymer. This is the conventional interpretation of this expression as used in patents (cf. the Guidelines for Examination in the EPO, C-III, 4.22). Besides, the respondent has based its novelty and inventive step objection on this interpretation from the outset. Thus, this interpretation of the claim wording could hardly have taken the appellant by surprise.

6.2 Furthermore, as pointed out by the respondent, it is highly questionable whether the scope of Claim 1 of the second auxiliary request is in fact different from the scope of Claim 1 of the main request. The amended claim relates to a film having at least one layer **comprising** a blend of three polymers. The use of the term "comprising" still allows for the presence of a fourth polymer besides the blend consisting of three polymers. This interpretation is even in line with the description in the patent in suit, which in paragraph [0083] discloses:

"The blend may contain other components e.g. other polymers and/or processing aids. Preferably, the blend

of the first, second and third polymers will comprise at least 50% by weight of the total blend of which it is part."

Thus, it is apparent from this passage that the blend referred to in Claim 1 is only a part of a more broadly defined "blend" which may contain other polymers. This is also in line with the experimental part of the patent in suit (cf. paragraphs [0147], [0150] to [0153], [0170], [0172] and [0173]), which discloses that the layer comprising the specific blend contains further polymers as stabiliser additives and processing aids.

Thus, the scope of Claim 1 of the second auxiliary request appears to be identical to the scope of Claim 1 of the main request and is therefore redundant. Consequently the second auxiliary request could not have been admitted into the proceedings for that reason also.

- 6.3 But even if one were to assume that Claim 1 was limited to a layer with only one blend of the three specific polymers, then E1 would no longer necessarily be the closest state of the art, and the relevance of the other documents cited before the opposition division, such as e.g. E4 cited in the appealed decision, would have to be re-examined. Since, however, the appeal was only based on E1, neither the respondent nor the board were able to consider the relevance of these other documents at the oral proceedings held before the board. Thus, admittance of the second auxiliary request into the proceedings would have raised issues requiring an adjournment of the oral proceedings. As this would not be allowable under Article 13(3) RPBA, the second

auxiliary request could not have been admitted to the proceedings for this reason either.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed

The Registrar:

The Chairman:

G. Röhn

W. Sieber