

Internal distribution code:

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

**Datasheet for the decision
of 5 May 2010**

Case Number: T 0126/06 - 3.3.09

Application Number: 00949305.7

Publication Number: 1214196

IPC: B32B 27/34

Language of the proceedings: EN

Title of invention:

A multilayer heat-shrinkable plastic film with barrier characteristics

Patentee:

Tecno Coating Engineering S.r.l.

Opponent:

Cryovac, Inc.

Headword:

-

Relevant legal provisions:

EPC Art. 83, 123(2)

Relevant legal provisions (EPC 1973):

-

Keyword:

"Main request (Sufficiency of disclosure - no)"

"Auxiliary request (added subject-matter - yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0126/06 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 5 May 2010

Appellant: Tecno Coating Engineering S.r.l.
(Patent Proprietor) Via Sempione, 9
I-28040 Marano Ticino, (NO) (IT)

Representative: Gervasi, Gemma
Notabartolo & Gervasi S.p.A.
Corso di Porta Vittoria 9
I-20122 Milano (IT)

Respondent: Cryovac, Inc.
(Opponent) 100 Rogers Bridge Road, Building A
Duncan, South Carolina 29334-0464 (US)

Representative: Fraire, Cristina
Sealed Air S.r.l.
Via Trento, 7
I-20017 Passirana di Rho (MI) (IT)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 14 November 2005
revoking European patent No. 1214196 pursuant
to Article 102(1) EPC 1973.

Composition of the Board:

Chairman: W. Sieber
Members: J. Jardón Álvarez
K. Garnett

Summary of Facts and Submissions

I. The grant of European patent No. 1 214 196 in respect of European patent application No. 00949305.7 in the name of Tecno Coating Engineering S.r.l., which had been filed on 11 July 2000 as International application PCT/EP00/06567 (WO 01/003922), was announced on 7 May 2003 (Bulletin 2003/19). The granted patent contained eight claims whereby Claim 1 read as follows:

"1. A multilayer heat-shrinkable not cross-linked plastic film biaxially oriented by the double bubble process, in which the various layers are arranged according to an A/B/C/D/C/B/A structure or to an A/C/D/C/A structure, **characterised in that:**

- the core layer D consists of a semi-aromatic and amorphous copolyamide resin or of a blend of copolyamides and amorphous polyamides;
- the C layers consist of adhesive resins;
- the B layers consist of a blend of copolymers and terpolymers or of LLDPE or of a blend of LLDPE with other alpha-olefines or with EVA, or of a heterophasic nucleated ethylene-propylene copolymer, and
- the A layers consist of a blend of copolymers and terpolymers of different type with respect to the blend of the B layers, or of a heterophasic nucleated ethylene-propylene copolymer, wherein said copolymers are propylene polymers containing between 2 and 6% of ethylene groups randomly set in the structure and having a density of between 0.895 and 9.0 g/cm³, a melt index of between 5 and 6 g/10 min (230°C/2.16 kg) and a melting

point of between 130 and 135°C, said terpolymers are propylene polymers containing ethylene and butylene-1 groups and having a density of between 0.890 and 0.895 g/cm³, a melt index of between 5 and 5.5 g/10 min (230°C/2.16 kg) and a melting point approximately of 135°C, and said blend of LLDPE has a melting point approximately of 120°C."

Claims 2 to 7 were dependent claims. Claim 8 was an independent claim directed to a process for the preparation of the film as claimed in Claim 1.

II. A notice of opposition was filed by Cryovac, Inc. on 3 February 2004 requesting revocation of the patent in its entirety. The opposition was based on the grounds of Article 100(a) EPC (lack of novelty and inventive step) and Article 100 (b) EPC (lack of sufficient disclosure).

The following documents were *inter alia* cited with the notice of opposition:

D2: EP 0 701 898 A1;

D3: EP 0 967 073 A2; and

D5: EP 0 305 959 A2.

During prosecution of the case before the opposition division the proprietor filed an amended set of claims (Claims 1-8), whereby Claim 1 was a combination of granted Claims 1 and 7 and Claim 8 was a new dependent process claim. Claims 1 and 8 read as follows:

"1. A multilayer heat-shrinkable not cross-linked plastic film biaxially oriented by the double bubble process, in which the various layers are arranged according to an A/B/C/D/C/B/A structure or to an A/C/D/C/A structure, characterised in that:

- the core layer D consists of a semi-aromatic and amorphous copolyamide resin or of a blend of copolyamides and amorphous polyamides;
- the C layers consist of adhesive resins;
- the B layers consist of a blend of copolymers and terpolymers or of LLDPE or of a blend of LLDPE with other alpha-olefines or with EVA, or of a heterophasic nucleated ethylene-propylene copolymer,
- the A layers consist of a blend of copolymers and terpolymers of different type with respect to the blend of the B layers, or of a heterophasic nucleated ethylene-propylene copolymer, wherein said copolymers are propylene polymers containing between 2 and 6% of ethylene groups randomly set in the structure and having a density of between 0.895 and 9.0 g/cm³, a melt index of between 5 and 6 g/10 min (230°C/2.16 kg) and a melting point of between 130 and 135°C, said terpolymers are propylene polymers containing ethylene and butylene-1 groups and having a density of between 0.890 and 0.895 g/cm³, a melt index of between 5 and 5.5 g/10 min (230°C/2.16 kg) and a melting point approximately of 135°C, and said blend of LLDPE has a melting point approximately of 120°C, and
- the stretch ratio, by the double bubble process, in both lengthwise and crosswise directions, is between 1:5 and 1:6."

"8. A process according to claim 7, characterised in that the said temperature gradient in the different zones of the said oven is:

zone 1: 400°C/zone 2: 360°C/zone 3: 250°C/zone 4: 150°C/zone 5: 100°C,
the corresponding temperatures measured on the film in the said different zones being:

zone 1: 138°C/zone 2: 138°C/zone 3: 120°C/zone 4: 75°C/zone 5: 70°C."

III. By its decision issued in writing on 14 November 2005 the opposition division revoked the patent.

The opposition division acknowledged that the objections of insufficiency of disclosure, lack of novelty and lack of inventive step against Claims 1 to 7 on file were not prejudicial to the maintenance of the patent in amended form. However, the opposition division revoked the patent because Claim 8 of the proprietor's request was objectionable under Rule 57a EPC 1973, i.e. the filing of a new dependent claim did not address any ground of opposition.

IV. On 13 January 2006 the patent proprietor (appellant) lodged an appeal against the decision of the opposition division and paid the appeal fee on the same day.

With the statement of grounds of appeal filed on 13 March 2006, the appellant filed a new set of claims, which was, apart from the deletion of the objected Claim 8, identical to the claim set before the opposition division, and requested that the decision under appeal be set aside and that the patent be maintained on the basis of its new request. The

appellant further requested that the appeal fee be refunded.

- V. By letter dated 18 July 2006, the opponent (respondent) requested that the appeal be dismissed and the patent be revoked in its entirety because the claimed subject-matter was neither novel nor inventive. Further, the European patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.
- VI. With letter dated 3 October 2006, the appellant filed four new documents. Since, however, these documents are not relevant to this decision; there is no need to go into details.
- VII. In a communication dated 27 August 2009, the board informed the parties that the appellant's new request overcame the only objection raised by the opposition division and that consequently the decision should be set aside. Concerning the request for reimbursement of the appeal fee the board saw no reason to order reimbursement.

The board further informed the parties that it would be prepared to remit the case to the opposition division, if the parties requested the remittal. Otherwise, the board would proceed to decide the case on the basis of the requests on file.

- VIII. By letters dated 27 October 2009 both the appellant and the respondent requested that the board proceed to decide the case on the basis of the requests on file.

- IX. On 28 December 2009 the board dispatched a summons to attend oral proceedings on 5 May 2010. In the attached annex to the summons the board drew the attention of the parties to the points to be discussed during the oral proceedings, namely the objections of the respondent concerning Articles 83, 54 and 56 EPC. In particular with respect to the possibility that the B layers consisted of "a blend of LLDPE with other alpha-olefins", the board took on board the respondent's objection that such a blend did not appear to make any technical sense.
- X. By letter dated 2 April 2010 the respondent informed the board that it would not attend the oral proceedings.
- XI. By letter dated 2 April 2010, the appellant filed three sets of claims for a new main request and two auxiliary requests together with two new documents.
- XII. On 5 May 2010, oral proceedings were held before the board, at which the respondent, as announced, was not represented. In the course of the discussion, the appellant withdrew its previous main and second auxiliary requests as well as its request for reimbursement of the appeal fee. Thus, the first auxiliary request filed with the letter dated 2 April 2010 became the appellant's (final) main request. Furthermore, the appellant submitted amended claims according to an auxiliary request.

Claim 1 of the main request is identical to Claim 1 before the opposition division (see above point II).

Claim 1 of the auxiliary request read as follows:

"1. A multi-layer heat-shrinkable not cross-linked plastic biaxially oriented, using the double bubble process, film having the following features:

(a) the layers are arranged according to a A/B/C/D/C/B/A structure;

(b) the core layer D consists of:

(b1) a semi-aromatic and amorphous copolyamide resin,
or

(b2) a blend of copolyamides and amorphous polyamides;

(c) the C layers consist of adhesive resins;

(d) the B layers are made of heterophasic nucleated ethylene-propylene copolymers;

(e) the A layers are made of:

(e1) a blend of propylene copolymers containing between 2 and 6% of ethylene groups randomly set in the structure and having a density of between 0.895 and 9.0 g/cm³, a melt index of between 5 and 6 g/10min and a melting point of between 130 and 135°C, and propylene terpolymers containing ethylene and butylene-1 groups and having a density of between 0.890 and 0.895 g/cm³, a melt index of between 5 and 5,5 g/10min and a melting point of 135°C;

(f) the stretch ratio in both the lengthwise and crosswise directions is between 1:5 and 1:6."

XIII. The arguments presented by the appellant in its written submissions and at the oral proceedings insofar as they

are relevant for the present decision may be summarized as follows:

- Concerning sufficiency of disclosure, the appellant noted that the term "heterophasic ethylene-propylene copolymer" used in the claims was usual in the field and had a specific meaning for the skilled person. However, it did not comment on the issue concerning a blend of LLDPE with other alpha-olefins, even when asked to do so at the oral proceedings before the board.

- As regards the auxiliary request, it pointed out that the specific combination of A and B layers required in Claim 1 was supported by paragraph [0070] in the patent in suit (corresponding to the passage on page 9, lines 11-15 of the application as filed) and Examples 1 and 6.

XIV. The written arguments of the respondent, as far as relevant to this decision, may be summarized as follows:

- In its reply to the statement of grounds of appeal, the respondent maintained the objections already made during the opposition procedure, namely that the subject-matter of the main request was not novel and lacked an inventive step, and that the European patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. In the context of the latter, the respondent explicitly referred to item 7 contained in the notice of opposition, without, however, re-

iterating the arguments in detail in order, so it said, to avoid unnecessary repetitions.

XV. The appellant (patent proprietor) requested that the decision under appeal be set aside and the patent be maintained on the basis of the claims according to the first auxiliary request filed with the letter dated 2 April 2010 (main request), alternatively on the basis of the claims contained on the single page of the "first auxiliary request" filed during the oral proceedings together with those contained on the second page of the second auxiliary request filed with the letter dated 2 April 2010 (auxiliary request).

The respondent (opponent) requested (in writing) that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible

MAIN REQUEST

2. *Sufficiency of disclosure (Article 83 EPC)*

2.1 Claim 1 of the main request is directed to a multilayer plastic film in which the various layers are arranged according to an A/B/C/D/C/B/A or an A/C/D/C/A structure. The definition of the B layers includes as one alternative that the B layers consist of a blend of LLDPE (linear low density polyethylene) with other alpha-olefins. In other words, this embodiment requires

that a polymer, namely LLDPE, is blended with monomers of which at least some are gaseous. It is in principle not conceivable how such a blend, even if it could ever be made, could be used in the double bubble process to prepare a heat-shrinkable multi-layer film having the promised barrier characteristics and high mechanical resistance.

2.2 The opponent had already pointed out in item 7 of the notice of opposition (heading "Insufficiency of Disclosure") that the text of the application as filed does not give any indication of the alpha-olefins that could be blended with the LLDPE in order to form the B layers. Lower alpha-olefins like propene-1 and butene-1 are in fact gases, higher alpha-olefins, such as hexene-1 and octene-1, are liquids at room temperature. Thus, if this reference to a blend of LLDPE with other alpha-olefins is not a mistake, sufficient information was missing in the application as filed to enable the person skilled in the art to repeat the invention as far as this embodiment is concerned. In fact, the only references in the application as filed relating to this embodiment merely repeat the wording of the claim, namely the passage at page 5, lines 22-24 of the application as filed under the heading "Summary" ("... the B layers consist of ... or of an LLDPE blend with other alpha-olefins ..."), and the passage on page 7, lines 6-7 ("Alternatively, the B layers could consist of LLDPE by itself or mixed with other alpha-olefins or with EVA.").

2.3 This objection was maintained by the respondent in its reply to the statement of grounds of appeal (there is an explicit reference to item 7 contained in the notice

of opposition, without, however, re-iterating the arguments in detail. Furthermore, the issue was taken on board by the board in the annex to the summons to oral proceedings (point IX, above).

However, the appellant never commented on this objection, not even when asked to do so at the oral proceedings. It merely specified in a request which was eventually withdrawn at the oral proceedings of 5 May 2010 that the alpha-olefins should have 4 to 12 carbon atoms. This amendment had no basis in the application as filed: paragraph [0083] of the patent specification (i.e. page 11, lines 12-15 of the application as filed) relied upon by the appellant in this context relates to the comonomers to be used in the ethylene-alpha olefin copolymers and not to the alpha-olefins to be blended with LLDPE. But even apart from this, it would not have overcome the objection, because the limitation to these alpha-olefins still includes gaseous butene-1.

- 2.4 For these reasons the claimed invention is not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art as far as the embodiment "the B layers consist ... of a blend of LLDPE with other alpha-olefins" is concerned. Therefore the main request is refused.

AUXILIARY REQUEST

3. *Amendments (Article 123 (2) EPC)*

- 3.1 In comparison with Claim 1 of the main request, Claim 1 of the auxiliary request has been further restricted to a seven layered film having the structure A/B/C/D/C/B/A.

whereby the definitions of the A and B layers, which in Claim 1 of the main request included several alternatives, have been limited to a single alternative each, namely a heterophasic nucleated ethylene-propylene copolymer for the B layers and a blend of propylene copolymers and propylene terpolymers for the A layers.

- 3.2 Thus, the deletion of all but one alternative in the lists defining the A and B layers leads to the "singling out" of one specific polymer combination for the A and B layers.

Such an amendment is only allowable under Article 123(2) EPC if this particular combination for the A and B layers is clearly and unambiguously derivable from the application as filed.

- 3.3 The appellant did not allege that there was an explicit basis for the combination now required in Claim 1 of the auxiliary request. Nor could the board find such a basis in the application as filed. But the appellant relied upon paragraph [0070] in the patent specification (corresponding to the passage at page 9, lines 11 - 15 of the application as originally filed) and Examples 1 and 6.

- 3.3.1 However, this passage in the description cannot provide support for the combination of the A and B layers now found in Claim 1 of the auxiliary request. Page 9 discloses that a film based on the coextrusion of the following polymers, namely polypropylene terpolymer / heterophasic nucleated ethylene-propylene copolymer / adhesive resin / semi-aromatic amorphous copolyamide /

adhesive resin / heterophasic nucleated ethylene-propylene copolymer / polypropylene terpolymer, biaxially oriented with the double bubble system, shows high characteristics of reaction, good mechanical resistance, particularly to piercing and tearing, even with values exceeding those of radiated films, and good barrier to oxygen properties. However, such a film, having an A layer made from a polypropylene terpolymer, is actually outside the scope of Claim 1 of the auxiliary request, which requires that the A layer consists of a **blend** of propylene copolymers and propylene terpolymers. Consequently, this passage cannot provide support for the specific combination required in Claim 1 of the auxiliary request.

3.3.2 The same reasoning applies to Examples 1 and 6 which again disclose embodiments not covered by amended Claim 1 because the A layers of the films prepared in these examples are also made of propylene terpolymers only but are not made of a **blend** of propylene copolymers and propylene terpolymers as defined in Claim 1.

3.4 In summary, the appellant's amendments with respect to layers A and B amount to an inadmissible singling out of a specific combination which is not clearly and unambiguously derivable from the application as filed (Article 123(2) EPC). The auxiliary request must therefore be rejected.

3.5 In Claim 1 of the auxiliary request the wording "the A layers consist of"/"the B layers consist of" has been replaced by the wording "the A layers are made of"/"the B layers are made of". According to the appellant this

amendment was to clarify that the A and B layers consisted not only of the polymers but that further additives could be present.

If one were to accept the appellant's argument that the change from "consist of" to "made of" actually broadens the interpretation of granted Claim 1, which required that the A and B layers "consist of" specified polymers, such an amendment would not be allowable under Article 123(3) EPC. At the oral proceedings there was an offer to re-introduce the granted wording. Since, however, the auxiliary request failed for other reasons, there was no need to pursue this issue.

4. In conclusion, none of the requests of the appellant is allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Röhn

W. Sieber