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DECISION of 14 December 2005

Case Number:	T 1190/02 - 3.3.09
Application Number:	94110763.3
Publication Number:	0634443
IPC:	C08J 5/18

Language of the proceedings: EN

Title of invention:

Puncture resistant heat shrinkable film containing narrow molecular weight ethylene alpha olefin

Patentee:

VISKASE CORPORATION

Opponent:

Sporos S.A.

Headword:

Relevant legal provisions: EPC Art. 123, 87, 56

Keyword:
"Inventive step (yes - after amendment)

Decisions cited:

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Catchword:

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Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 1190/02 - 3.3.09

D E C I S I O N of the Technical Board of Appeal 3.3.09 of 14 December 2005

Decision under appeal:	Decision of the Opposition Division of the European Patent Office posted 1 October 2002 revoking European patent No. 0634443 pursuant to Article 102(1) EPC.
Representative:	Reinhard-Skuhra-Weise & Partner Friedrichstrasse 31 D-80801 München (DE)
Respondent: (Opponent)	Sporos S.A. Thessi Tzima 19400 Koropi Attikis (GR)
Representative:	Weinhold, Peter Winter, Brandl, Fürniss, Hübner, Röss, Kaiser, Polte Partnerschaft Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Strasse 22 D-85354 Freising (DE)
Appellant: (Proprietor of the patent)	VISKASE CORPORATION 6855 West 65th Street Chicago, Illinois 60638 (US)

Composition of the Board:

Chairman:	P. Kitzmantel
Members:	J. Jardon Alvarez
	MB. Tardo-Dino

Summary of Facts and Submissions

I. The grant of European patent No. 0 634 443 in respect of European patent application No 94 110 763.3 in the name of VISKASE CORPORATION, which had been filed on 11 July 1994 claiming US priorities of 12 July 1993 (US - 89914) and 8 December 1993 (US - 163016), was announced on 10 March 1999 (Bulletin 1999/10) on the basis of 16 claims. Claim 1 read as follows:

> "1. A heat shrinkable puncture resistant, biaxially stretched thermoplastic film suitable for use in fabricating bags for packaging food articles comprising a polyethylene which is a linear copolymer of ethylene and higher alpha-olefin containing from 4 to 8 carbon atoms, having a density of between 0.88 and 0.905 q/cm^3 , a melt index not exceeding 1.5 g/10min, as determined by ASTM D-1238, condition E, a molecular weight/size distribution ratio Mw/Mn below 3, as measured by the GPC procedure of ASTM D-3593-80, a melting point below 102°C, a Young's Modulus of below 850 Kg/cm^2 , and wherein the film shrinks at least 45 percent at a temperature of about 90°C in at least one of the machine and transverse directions, as determined by measuring unrestrained shrink of the stretch film at 90°C for 5 seconds."

Claims 2 to 16 were dependent claims.

II. A Notice of Opposition was filed against the patent by Sporos S.A. on 10 December 1999. The Opponent requested the revocation of the patent in its full scope based on Article 100(a) EPC (lack of novelty and inventive step) and on Article 100(b) EPC (insufficient disclosure). The opposition was *inter alia* supported by the following documents:

D1: EP-A-0 562 493

D2: US-A-5 283 128

D3: Resin Modifiers TAFMER from Mitsui Petrochemical Industries, Ltd.

D4: EP-A-0 562 496 and

D5: WO-A-93/11940.

III. By its decision announced orally on 9 April 2002 and issued in writing on 1 October 2002 the Opposition Division revoked the patent.

> This decision related to four requests: a main request corresponding to the maintenance of the patent as granted; an auxiliary request I filed with letter dated 30 July 2001 and two further auxiliary requests, II and III filed on 9 April 2002, during the oral proceedings.

> The Opposition Division revoked the patent because in its opinion document D1 was novelty destroying for the subject-matter of Claim 1 of the main request; the auxiliary requests I and II did not comply with Article 123(2) EPC and the auxiliary request III lacked inventive step having regard to the disclosure of D5, which disclosed closely related multiple layer heat sealable films.

IV. On 2 December 2002 the Patent Proprietor (Appellant) lodged an appeal against the decision of the Opposition Division and paid the appeal fee on the same day.

> In the Statement of Grounds of Appeal filed on 11 February 2003, the Appellant made its former auxiliary request III its main request and filed new auxiliary requests I to V.

- V. In response to the Board's communication, issued on 14 September 2005 in preparation for the oral proceedings, the Appellant filed with letter dated 14 November 2005 three further auxiliary requests ordered so as to be auxiliary requests I, II and VII.
- VI. In letters dated 27 October 2003 and 14 November 2005 the Respondent requested the dismissal of the appeal. It argued that the patent was not entitled to the priority date of 12 July 1993, which concerned a differently defined invention. Consequently documents D1 and D4 should be considered as pre-published prior art and a disclaimer could not be used for delimiting the claims against these documents (cf. Decision G 1/03 of 8 April 2004, OJ EPO 2004, 413).
- VII. On 14 December 2005, oral proceedings were held before the Board.

After discussing the issues of the entitlement to priority, allowability of disclaimer, clarity and inventive step of the main request and auxiliary requests I to V, the Appellant withdrew all its previous requests and filed as its sole request a "new main request" based essentially on previous auxiliary request V with editorial amendments to correct obvious mistakes in Claims 1 and 9 and to adapt Claims 3 and 4 to the wording of Claim 1. The Respondent did not raise any objection to these editorial amendments of auxiliary request V.

Independent Claims 1 and 9 of the new main request read as follows:

"1. A heat shrinkable puncture resistant, biaxially stretched thermoplastic film suitable for use in fabricating bags for packaging food articles comprising a blend of a first ethylene alpha olefin copolymer which is a linear copolymer of ethylene and buten having a density of about 0.88 g/cm^3 , a melt index of about 0.5 g/10min, an Mw value of about 190,000, an Mn value of about 92,600, as measured in accordance with the GPC procedure of ASTM D-3593-80, a melting point of about 67°C, and a Young's Modulus of about 400 kg/cm², a dynamic puncture value of about 11.5 cmkg/mil (4528 cmkg/cm), and a Vicat softening point of about 62°C, as measured in accordance with ASTM D-1525, and a second ethylene alpha olefin copolymer which is a linear terpolymer of ethylene, butene and hexene having a density of about 0.900 g/cm^3 , a melt index of about 1.2 g/10min, an Mw value of about 92,000, an Mn value of about 50,000, a melting point of about 94°C, and a Young's Modulus of about 773 kg/cm², and a Vicat softening point of 75-83°C, as measured in accordance with ASTM D-1525, said second ethylene alpha olefin copolymer being prepared by a metallocene single site catalyst, and wherein the film shrinks at least 45 percent at a temperature of about 90°C in at least one of the machine and transverse directions, as

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determined by measuring unrestrained shrink of the stretch film at 90°C for 5 seconds.

9. An irradiated heat shrinkable puncture resistant, biaxially stretched thermoplastic three layer film suitable for use in fabricating bags for packaging food articles including a vinylidene chloride-methyl acrylate copolymer oxygen barrier-core layer and an outer layer on each side of said oxygen barrier-core layer, said outer layers comprising a blend of between 65 and 75% of a polyolefine which is a linear copolymer of ethylene and buten having a density of about 0.88 g/cm³, a melt index of about 0.5 g/10min, an Mw value of about 190,000, an Mn value of about 92,600, as measured in accordance with the GPC procedure of ASTM D-3593-80, a melting point of about 67°C, and a Young's Modulus of about 400 kg/cm², a dynamic puncture value of about 11.5 cmkg/mil (4528 cmkg/cm), and a Vicat softening point of about 62°C, as measured in accordance with ASTM D-1525, and between 20 and 30% ethylene vinyl acetate copolymer and said film shrinks at least 55% in both the machine and transverse directions at 90°C."

Claims 2 to 8 and 10 were dependent claims.

- VIII. The arguments of presented by the Appellant in its written submissions and at the oral proceedings held on 14 December 2005 and may be summarized as follows:
 - Claim 1 of the main request differed from the granted Claim 1 by the incorporation of additional features of granted Claims 6, 7, 10 and 11. Moreover, the use of a metallocene single site catalyst was

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further supported by the examples and by the disclosure on page 4, lines 5 to 8, and page 16, lines 22 to 24, of the B-document. Claim 9 was based on the features of granted Claims 10 and 14.

- The Appellant considered document D1 as the closest prior art. The problem underlying the opposed patent was to provide a heat shrinkable biaxially stretched thermoplastic film having high shrink properties and high tensile strength properties and high dynamic puncture resistance. This problem was solved by the claimed films according to Claims 1 and 9. The examples in the patent showed the advantageous shrink properties of the films of the invention. For instance the film according to sample 9 showed improved shrink force and hot water puncture when compared with prior art film sample 8A. Moreover, the use of a blend allowed the adjusting of the shrink properties by varying the amount of each monomer.
- There was no hint to this solution in the prior art. Thus, in D5 the problem was to provide multilayer heat sealable films having a seal initiation temperature of about 100°C or lower. The films according to D5 including a copolymer of a linear low density polyethylene showed relatively low biaxial shrink properties (see paragraph [0004] of the description of the patent). The improved properties of the films of the patent in suit compared with ultra low density polyethylene would dissuade the skilled person from using the teaching of D5.

- Concerning Claim 9 the Appellant pointed out that D1 would teach away from the invention as this document required as an essential feature the presence of 10 to 20 wt% of plastomer. Moreover, the Appellant pointed out that most of the plastomers covered by D1 could not form a film when used in high amounts (see Table 1, samples 1 and 2). The films according to Claim 9 showed very good shrink properties and dynamic puncture values (see sample 20A on Table M) and should be regarded as inventive.
- IX. The Respondent essentially argued as follows:
 - Claim 1 disclosed a combination of features not covered by the original disclosure and therefore it contravened Article 123(2) EPC.
 - The claimed subject-matter could not validly claim priority of 12 July 1993 (US-89914) and as a result documents D1 and D4 were to be regarded as pre-published documents within the meaning of Article 54(2) EPC.
 - Concerning inventive step, the Respondent also considered document D1 as the closest prior art. It disclosed in Claim 1 biaxially oriented heat shrinkable films comprising a three component blend of a polyethylene, ethylene alpha-olefin plastomer copolymer and ethylene vinyl acetate copolymer. The films therein disclosed showed very good shrink properties (see, for instance, Table L, samples 24 and 25). Although the values in D1 could not be directly compared with those of the patent, the shrink properties were similar. In any case the

patent itself showed that films including Tafmer A-0585, disclosed in D1, showed better properties than the presently claimed films. Thus, for instance, the film according to sample 8A in the patent showed better shrink at 90°C in both the machine and transverse direction than the claimed films according to samples 9 and 10.

- The films according to Claims 1 and 9 of the patent were then seen as an arbitrary selection within the general teaching of D1 and, in the absence of an unexpected effect, lacking inventive step.
- X. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims 1 to 10 of the new main request as filed during the oral proceedings.

The **Respondent** requested that the appeal be dismissed.

Reasons for the Decision

- 1. The appeal is admissible.
- 2. Amendments (Article 123 EPC)
- 2.1 The set of claims according to the new main request includes two independent claims which cover two preferred embodiments within the scope of granted claim 1 and supported by the original disclosure:
- 2.1.1 Claim 1 is a combination of originally filed Claims 1,6, 7, 10 and 11. It is directed to a thermoplastic film

comprising a blend of two ethylene alpha copolymers, one of them being prepared by a metallocene single site catalyst in accordance with the preferred embodiments disclosed on originally filed claims 6 and 7. Moreover the two ethylene alpha olefin copolymers have been defined in accordance with the embodiments of Claims 10 and 11 as originally filed.

- 2.1.2 Claim 9 is a combination of originally filed Claims 1, 10 and 14. It is directed to an irradiated thermoplastic three layer film as claimed on original Claim 14 wherein the ethylene alpha olefin copolymer has been limited to the film composition as defined in Claim 10 as originally filed.
- 2.1.3 Dependent Claims 2 to 8 and 10 find their support in originally filed Claims 2 to 6, 12, 13 and 16.
- 2.2 The Respondent opposed the amendments to Claim 1. In its opinion the combination of the features of Claims 10 and 11 was not covered by the original disclosure because Claim 1 referred back to Claims 1 to 7, but not to Claim 10. Support could also not be found in the working examples as they were made with specific copolymers and Claim 1 was not limited to the use of such specific copolymers.
- 2.2.1 This argument cannot be accepted by the Board. It was clear from the application as originally filed (i) that the preferred ethylene alpha olefin copolymers to be used were the Tafmer A-0585 and the EXACT® 3033 disclosed on Table C on pages 14 to 15 (see also Claims 10 and 11), (ii) that the Exxon EXACT® Type 3033 was prepared by using a metallocene single catalyst (page 8,

lines 7 to 11) and (iii) that blends comprising said preferred copolymers were the most preferred embodiment of the invention (see Claim 7 and page 40, lines 14 to 18 of the application as originally filed). Precisely this preferred embodiment has been made the subjectmatter of amended Claim 1, which is thus clearly supported by the original documents (Article 123(2) EPC).

- 2.3 Moreover the scope of the claims has been clearly limited and does not extend beyond the scope of the granted patent as required by Article 123(3) EPC. This fact was not disputed by the Respondent.
- 2.4 Additionally, it is noted that the method of measuring the melt index has been omitted from Claims 1 and 9. The method of determining the melting point was not given in the claims as originally filed and was added during the examination of the file in accordance with the disclosure given on page 19 of the description. This method of measurement is a standard method in the field and it is given on page 8, lines 33 to 34 of the granted patent. The deletion of this feature of the claims does not modify its scope.
- 2.5 The Board is therefore satisfied that the amendments made to the claims meet the requirements of Article 123(2),(3) EPC.
- 3. Priority (Article 87 EPC)
- 3.1 Documents D1 and D4 were both published on 29 September 1993, that is to say between the first and second priority dates claimed in the patent in suit. Thus,

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they constitute state of the art under Article 54(3)(4) EPC if the claimed subject-matter is entitled to the priority right of the US application 89914 filed on 12 July 1993 (in the following P1), but otherwise constitutes state of the art under Article 54(2) EPC.

- 3.2 The priority document P1 is directed to a thermoplastic film comprising a polyethylene having physical properties which correspond to those of the Tafmer A-0585 (see Claim 1 of P1; see also page 14, Table C).
- 3.2.1 This priority document does not disclose a blend of two ethylene alpha olefin copolymers and it does not mention the use of a polyethylene having the physical properties of the Exact 3033 as claimed in present Claim 1 (see Claim 1, the second ethylene alpha olefin copolymer).
- 3.2.2 Moreover P1 does not disclose irradiated thermoplastic three layer films wherein the outer layers comprise a blend of between 65 and 75% of a polyolefin (Tafmer A-0585), and between 20 and 30% ethylene vinyl acetate copolymer as claimed in present independent Claim 9.
- 3.3 Therefore, the first priority right is not valid for the currently claimed subject-mater and documents D1 and D4, having been published before the second priority date, are prior art documents in the sense of Article 54(2) EPC and have to be considered also under Article 56 EPC.

4. Novelty (Article 54 EPC)

The Board is satisfied that the claimed subject-matter is novel over the cited prior art. The Respondent acknowledged the novelty of the currently claimed subject-matter during the oral proceedings and thus no further discussion is necessary.

- 5. Inventive step (Article 56 EPC)
- 5.1 The patent in suit relates to thermoplastic films having high puncture resistance, high biaxial heat shrink and good optical properties and being suitable for use in fabricating bags for packaging food articles (paragraphs [0002] and [0017]).
- 5.1.1 Claim 1 is directed to heat shrinkable puncture resistant, biaxially oriented stretched thermoplastic films comprising a blend of two ethylene alpha olefin copolymers defined by its physical properties. These physical properties correspond to those of the ethylene-butene copolymer known as Tafmer A-0585, and the ethylene-butene-hexene terpolymer prepared by a metallocene single site catalyst known as Exact[®] 3033 (see pages 6 to 7, paragraph [0026], Table C).
- 5.1.2 Claim 9 is directed to an irradiated heat shrinkable puncture resistant biaxially stretched thermoplastic three layer film including an oxygen barrier-core layer and two outer layers comprising a blend of between 65 and 75% of a polyolefin which is Tafmer A-0585 and between 20 and 30% ethylene vinyl acetate copolymer.

5.2 Closest prior art

- 5.2.1 The Board considers, in agreement with the parties to the proceedings, that the closest prior art is D1.
- 5.2.2 This document relates to a biaxially oriented heat shrinkable film comprising a three component blend of a (i) polyethylene selected from very low density polyethylene (VLDPE), linear low density polyethylene (LLDPE) and mixtures thereof, (ii) ethylene alphaolefin plastomer copolymer of density below 0,90 g/cm³ and (iii) ethylene vinyl acetate (EVA) copolymer as major components (see Claim 1).
- 5.2.3 As suitable ethylene alpha-olefin plastomers, those manufactured by Mitsui Petrochemical Industries, Ltd, under the name Tafmer, are mentioned (see page 11, lines 33 to 35 and Table G on pages 12 to 13). The content of said ethylene alpha-olefin plastomer copolymer in the three component composition should be between about 10 and about 20 wt% of the total weight and preferably between 13 and 17 wt% (see Claim 1; see also page 20, lines 14 to 19 and Figure 2).
- 5.2.4 The films of D1 are used for packaging of food such as poultry, processed meat and fresh red meat. The blends of D1 are said to show machine direction and transverse direction shrink properties similar to those of pure EVA-film and plastic orientation properties similar to those of a pure VLDPE-film. Moreover they show physical properties which on balance are at least as favourable as films using films employing EVA/VLDPE blends (see page 2, lines 1 to 2 and 52 to 54, page 3, lines 8 to 13).

5.2.5 In example 2 of D1 a film is prepared of a blend of 42,5 wt% EVA, 42,5 wt% VLDPE and 15% Tafmer TX 269 (see Table I, Sample No 22C). The Tafmer TX 269 used in this example has later on been renamed by Mitsui Petrochemical Ltd. as Tafmer A-0585 (cf.: D2, col. 16, lines 4 to 7) and the two designations therefore relate to the same copolymer; in the following the designation Tafmer A-0585 is used even when reference is made to sample 22 C, to avoid any misunderstanding.

> All the remaining examples in D1 use plastomers which are outside the scope of the claims of the patent in suit.

- 5.2.6 The subject-matter of Claim 1 of the patent in suit thus differs from the disclosure of example 2, sample 22C of D1, by the use of a blend of Tafmer A-0585 with a further ethylene alpha olefin copolymer, namely the Exact[®] 3033.
- 5.2.7 The subject-matter of Claim 9 of the patent differs from the disclosure of D1 by using higher amounts of Tafmer (65 to 75% compared to 10 to 20% in D1) and by the absence of a polyethylene selected from VLDPE, LLDPE and mixtures thereof.
- 5.3 Problem to be solved and its solution
- 5.3.1 Regarding the prior art as disclosed in D1, the present description states that there is a need for biaxially stretched films with even higher heat shrink and higher physical strength properties than heretofore available (see description, paragraph [0010]) and defines the

technical problem to be solved as to provide a heat shrinkable biaxially stretched thermoplastic film with higher shrink, higher tensile strength and dynamic puncture resistance properties than obtainable with prior art EVA and/or polyethylenes (see paragraphs [0011] - [0013]).

- 5.3.2 During the oral proceedings the Appellant pointed out that the films according to Claim 1 of the patent present the best balance of properties of all the films exemplified. Thus, the inventive films according to Table J, samples 9 and 10, show good shrink properties and higher dynamic puncture than prior art films (sample 7). Moreover the inventive films of samples 16B, 21 and 22 also show improved dynamic puncture values when compared with prior art films (see Tables L and M).
- 5.3.3 Although a direct comparison of the claimed films with the films according to D1, especially sample 22C, is not possible because this document is silent about many of the relevant properties of the films therein obtained (see D1, page 18, Table I), the Board acknowledges the existence of improved dynamic puncture resistance properties of the claimed films for the following reasons:

The object of document D1 is to provide films having shrink properties similar to those of pure EVA films, and plastic orientation properties similar to those of pure VLDPE films (see D1, page 2, line 52 to page 3, line 5) and actually the films obtained in D1 show shrink properties similar to those of previously known films (see page 21, lines 6 to 8; page 22, lines 41 to 48; page 23, lines 3 to 14 and Table L; page 32, lines 15 to 20). D1 is silent about any <u>improvement</u> of the dynamic puncture resistance of the films therein disclosed and indeed the dynamic puncture values of the films according to D1 are not essentially different from those of prior art films comprising EVA and VLDPE. Thus the dynamic puncture values of the films of D1 including a plastomer are 1,94 and 1,98 cmkg/mil (see Table L, samples 24 and 25) while the control sample 23 made of EVA and VLDPE has a dynamic puncture value of 1,98 cmkg/mil.

On the contrary, the films of the patent in suit show substantially higher dynamic puncture resistance values than prior art VLDPE-EVA films in all the examples in the patent. Thus, the non-irradiated films according to the invention, samples 9 and 10, have dynamic puncture values of 4,7 and 7,9 cmkg/mil respectively, while the prior art VLDPE/EVA film, sample 7 has a dynamic puncture of 2,5 cmkg/mil and the irradiated films according to invention samples 12, 13 and 14 have respectively dynamic puncture values of 3,48; 4,23 and 5,48 cmkg/mil, higher than the corresponding prior art sample 11 with a value of 2,62 cmkg/mil (see also further examples on Tables L and M). Thus, even if the values in different test series cannot precisely be compared with each other, the films of the patent in suit in all cases show improved dynamic puncture values over the films disclosed in D1 originating from the present proprietor.

From the above it can be accepted that the dynamic puncture resistance of the films of the patent in suit is improved over that of prior art films according to D1, while their shrink properties are at least comparable.

- 5.3.4 It has been pointed out by the Respondent that the films according to samples 8A and 8B of the patent show better shrink properties and dynamic puncture values than the claimed films and that therefore the currently claimed films could not be seen as an improvement over the disclosure of D1. The Board finds this argument unconvincing because the films according to samples 8A and 8B do not correspond to prior art films as disclosed in D1 or somewhere else. In other words, the fact that such not claimed films 8A and 8B also show good shrink and dynamic puncture values is not relevant for the assessment of inventive step because these embodiments were not part of the known state of the art.
- 5.3.5 The objective problem to be solved by the patent in suit vis-à-vis D1 can then be seen in the provision of thermoplastic heat shrinkable films having improved dynamic puncture resistance properties.
- 5.3.6 This problem has been credibly solved by the films of independent Claims 1 and 9 as discussed above (see 5.3.3.).

5.4 Inventive step

5.4.1 The remaining question is thus whether the prior art suggests to a person skilled in the art the solution of the technical problem indicated in point 5.3.5 above in the way proposed by Claim 1 and Claim 9. Claim 1

- 5.4.2 The subject-matter of Claim 1 differs from the disclosure of D1 by the use of a blend of Tafmer A-0585 with another ethylene alpha olefin copolymer, namely the Exact® 3033, which is prepared by a metallocene single site catalyst.
- 5.4.3 The only plastomers mentioned in D1 are those of the Tafmer family (see page 11, lines 33 to 35). There is therefore no hint in D1 suggesting the use of other plastomers or the use of a blend of a Tafmer plastomer with another plastomer prepared by a metallocene single site catalyst.
- 5.4.4 Document D5 discloses laminar polyolefin films having a base layer comprising a blend of an olefin polymer and a very low density ethylene/alpha monoolefin copolymer (having a density of from 0,88 to 0,915 g/cm³) and a heat sealable layer comprising a very low density copolymer of ethylene and a different alpha monoolefin (see Claim 1). Although the copolymers used in D5 have some properties similar to those of the patent in suit, neither Tafmer A-0585 nor Exact[®] 3033 nor any other copolymer having all the properties required by the claimed invention are disclosed in D5.
- 5.4.5 In the introductory part of D5 it is stated that polypropylene and other crystalline polyolefin films typically require heat sealing initiation temperatures upwards of 120°C before adequate film seal strengths are obtained (see paragraph bridging pages 2 and 3). The main object of D5 is then to provide multilayer heat sealable films having good hot tack seal strength

at temperatures in the range of 93,3 to 143,3°C (see page 6, lines 29 to 33).

- 5.4.6 This problem is far removed from the problem of improving the dynamic puncture resistance properties according to the patent in suit. Due to this difference in the problem and to the facts that the copolymers used in D5 are different from those used in the patent in suit and that all the films exemplified in D5 are unoriented, the skilled person would not find any suggestion in this document of how to modify the films of D1 in order to arrive at the subject-matter of Claim 1.
- 5.4.7 For these reasons the subject-matter of Claim 1 involves an inventive step over these citations.

Claim 9

- 5.4.8 The irradiated thermoplastic three layer films according to Claim 9 differ from the films according to D1 by the presence of higher amounts of Tafmer (65 to 75% compared to 10 to 20% in D1) and by the absence of a polyethylene selected from VLDPE, LLDPE and mixtures thereof.
- 5.4.9 The films according to D1 include, as essential feature, the presence of 10 to 20 wt% of plastomer (see Claim 1) and preferably 13 to 17 wt% (see Claim 2). Moreover D1 states that the presence of higher amounts of plastomer reduce the orientation force and that the amount of plastomer should be less than 20% (see page 19, lines 57 to 58 and page 20, lines 14 to 19).

5.4.10 It is thus quite unexpected and actually against the teaching of D1 that the films according to Claim 9 show improved dynamic puncture resistance values (see Table M, sample 20A) and consequently the subjectmatter of Claim 9 involves an inventive step also in respect of this disclosure.

- 5.4.11 In summary, the grounds of opposition under Article 100(a) EPC do not prejudice the maintenance of the patent in the form as amended according to the new main request.
- 5.4.12 Dependent Claims 2 to 8 and 10 concern particular embodiments within the scope of Claims 1 and 9 and are therefore likewise allowable.

Order

For these reasons it is decided that:

- 1. The decision under appeal is set aside.
- 2. The case is remitted to the Opposition Division with the order to maintain the patent on the basis of Claims 1 to 10 of the new main request as filed during the oral proceedings, after any necessary consequential amendment of the description.

The Registrar:

The Chairman:

G. Röhn

P. Kitzmantel