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**Datasheet for the decision  
of 26 June 2007**

**Case Number:** T 0295/05 - 3.3.09

**Application Number:** 95905377.8

**Publication Number:** 0734426

**IPC:** C09J 153/02

**Language of the proceedings:** EN

**Title of invention:**

Low viscosity hot melt pressure sensitive adhesive compositions

**Patentee:**

ExxonMobil Chemical Patents, Inc.

**Opponent:**

Shell International B.V.  
3M Innovative Properties Company

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 56, 87(1)

RPBA Art. 10b(3)

**Keyword:**

"Admissibility of late filed requests: Main request (yes);  
auxiliary requests 1-4 (no)"

"Valid priority claim (no)"

"Main request: Inventive step (no)"

**Decisions cited:**

G 0002/98

**Catchword:**

-



Case Number: T 0295/05 - 3.3.09

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.09  
of 26 June 2007

**Appellant:** ExxonMobil Chemical Patents, Inc.  
(Patent Proprietor) 5200 Bayway Drive  
Baytown, TX 77522 (US)

**Representative:** Bawden, Peter Charles  
Bawden & Associates,  
4, The Gatehouse  
2 High Street  
Harpenden,  
Hertfordshire AL5 2TH (GB)

**Respondents:** Shell International B.V.  
(Opponent I) Intellectual Property Services  
Postbus 384  
NL-2596 HR Den Haag (NL)

**Representative:** Kortekaas, Marcel C.J.A.  
Exter Polak & Charlouis B.V.  
Postbus 3241  
NL-2280 GE Rijswijk (NL)

(Opponent II) 3M Innovative Properties Company  
2501 Hudson Road  
St.Paul, Minnesota 55 144 - 1000 (US)

**Representative:** Aleandri-Hachgenei, Lorraine E.  
3M Deutschland GmbH  
Office of Intellectual Property Counsel  
Carl-Schurz-Straße 1  
D-41453 Neuss (DE)

**Decision under appeal:** Decision of the Opposition Division of the European Patent Office orally announced 9 December 2004 and posted 20 January 2005 revoking European Patent No. 0734426 pursuant to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** P. Kitzmantel  
**Members:** W. Ehrenreich  
M-B. Tardo-Dino

## Summary of Facts and Submissions

- I. Mention of the grant of European patent No. 0 734 426 in respect of European patent application No. 95 905 377.8, filed on 13 December 1994 as International application No. PCT/US94/14384 in the name of *Exxon Chemical Patents Inc.*, was announced on 2 September 1998 (Bulletin 1998/36).

The patent, entitled "*Low viscosity hot melt pressure sensitive adhesive compositions*" was granted with thirteen claims, Claims 1, 9 and 10 reading as follows:

"1. A hot melt pressure sensitive adhesive composition comprising a mixture of:

- (a) 100 parts by weight of a thermoplastic elastomer having the structure S-I-S wherein S is substantially a polystyrene block, I is substantially a polyisoprene block and wherein the content of polystyrene in said thermoplastic elastomer ranges from 10 to 30% by weight and wherein the number average molecular weight of said thermoplastic elastomer ranges from 50,000 to 175,000, said thermoplastic elastomer having less than 0.1 wt% diblock S-I;
- (b) from 70 to 150 parts by weight of a petroleum resin tackifier having a softening point in the range of from 85°C to 105°C, said resin being a Friedel Crafts Copolymer comprising:
  - (i) a petroleum feed comprising C<sub>5</sub> olefins and C<sub>5</sub> diolefins or a mixture of C<sub>5</sub> and C<sub>6</sub> olefins

and diolefins, said feed being obtained from the cracking of petroleum feedstock, copolymerized with

- (ii) from 5 to 15% by weight, based on component (i), of one or a mixture of monovinyl aromatic compounds having 8-9 carbon atoms;

said composition characterized as having a melt viscosity at 175°C of less than 100,000 mPa's as measured by ASTM-D3236."

"9. A process for preparing an adhesive tape comprising:

- (a) heating the hot melt pressure sensitive adhesive composition of any of claims 1-8 to a temperature in the range of from 150°C to 200°C;
- (b) applying a coating of said melt to the surface of a tape substrate at a speed greater than or equal to 500m/min. to form a coated substrate; and
- (c) cooling said coated substrate."

"10. An adhesive tape comprising a tape substrate having the adhesive composition of any of claims 1-8 applied to one surface thereof at a dry thickness in the range of from 10 to 65 g/cm<sup>2</sup>."

Claims 2 to 8 and 12, 13 were dependent on Claim 1, and Claim 11 was dependent on Claim 10.

II. Notice of opposition requesting revocation of the patent in its entirety was filed by

*Shell Internationale Research Maatschappij B.V.* -

Opponent I on 2 June 1999

and

*3M Innovative Properties Company* - Opponent II on

2 June 1999.

The Opponents based their objections on Articles 100(a) (lack of novelty and lack of inventive step) and 100(c) EPC and cited *inter alia* the following documents in support of the objections under Article 100(a) EPC:

- D10 Exxon Technical Information Leaflet TI-0106-CLS-1 "*Escorez® 2596 versus Wingtack Extra in Vector® PSA Formulations*" from November 1991 (as concluded from the printing code "T1061191-1" on the first page, where the digits 106 correspond to the product code and the ensuing four digits correspond to the month and year of publication);
- D23 F.C. Jagisch: "*Recent Developments in Styrene Block Copolymers for Tape and Label PSA's*"; European Tape and Label Conference, Brussels, 28 to 30 April 1993;
- D29 "*HMPSA For Tape Applications*": Handout distributed by L. Jacob during his lecture held at the 19th Münchener Klebstoff- und Veredelungsseminar, which took place from 23 to 25 October 1994.

Opponent I further submitted that the patent proprietor was not entitled to the first priority (US 167545) dated 15 December 1993. Therefore D29, which was made available to the public before the second priority date of 28 November 1994, became citable prior art.

III. With its decision orally announced on 9 December 2004 and issued in writing on 20 January 2005 the Opposition Division revoked the patent.

The decision was based on the sets of claims according to the main request and auxiliary request 4, both submitted during the oral proceedings, and on the sets of claims according to auxiliary requests 2 and 3, both submitted with the letter dated 11 October 2004.

In its decision the Opposition Division agreed with the submission of Opponent I that the patent proprietor was not entitled to the first priority. It was held that the molecular weight range of from 50,000 to 175,000 for the thermoplastic elastomer resin indicated in the patent as granted was not disclosed in the priority document US 167545.

Concerning the public availability of the document D29, the Opposition Division referred to the declaration of Mr. Jacob who was the inventor of the claimed subject-matter. The Opposition Division stated that Mr. Jacob had attended the oral proceedings and had declared that D29 represented the printed version of the lecture given by him in October 1993 at the 19th Münchener Klebstoff- und Veredelungstage and that he had distributed the document on the same day and made it available to the public (paragraph bridging pages 9/10 of the decision). D29 was therefore citable prior art.

The subject-matter of the main request was considered not to be novel over the disclosures given in the documents D10, D23 and D29. The Opposition Division held that all these documents described pressure-

sensitive adhesive compositions containing the S-I-S triblock elastomer component "Vector 4111" and the tackifier "Wingtack Extra" or "Escorez 2203" which were embraced by the elastomer and tackifier components defined in Claim 1 and which were characterized in the patent specification itself as suitable adhesive ingredients.

Auxiliary requests 2 and 3 were not allowed under Article 123(2) EPC.

The subject-matter according to auxiliary request 4 was considered to be not inventive. The Opposition Division held that the problem to be solved was the provision of low viscosity HMPSA (hot melt pressure sensitive adhesive) compositions which can be applied to substrates as a melt using high speed coating equipment. The claimed solution to this problem by the choice of the specific coating temperature range and coating speed was obvious because these features were already foreshadowed in D29.

- IV. On 2 March 2005 the patent proprietor (hereinafter: the Appellant) lodged an appeal against the decision of the Opposition Division. The Statement of the Grounds of Appeal was submitted on 13 May 2005. Enclosed were several sets of claims as bases for a new main request and auxiliary requests 1 to 14.
  
- V. With a letter dated 25 May 2007 new sets of claims as bases for a new main request and auxiliary requests 1 to 5, replacing all former requests, were filed.



In preparation for the oral proceedings before the Board, scheduled for 26 June 2007, the Appellant, with a letter dated 21 June 2007, filed further submissions including three sets of claims as bases for a new main request and auxiliary requests 1 and 2 to replace all former requests.

- VI. In the oral proceedings sets of claims according to a modified main request (Claims 1 to 5) and a modified auxiliary request 1 (Claims 1 to 6) were submitted. In the course of the discussion, two further sets of claims as bases for auxiliary requests 3 (Claims 1 to 4) and 4 (Claims 1 to 4) were presented.

Claim 1 of the main request reads as follows:

"1. A process for preparing an adhesive tape comprising:

- A) heating a hot melt pressure sensitive adhesive composition comprising a mixture of
  - (a) 100 parts by weight of a thermoplastic elastomer having the structure S-I-S wherein S is substantially a polystyrene block, I is substantially a polyisoprene block and wherein the content of polystyrene in said thermoplastic elastomer ranges from 10 to 30% by weight and wherein the number average molecular weight of said thermoplastic elastomer ranges from 50,000 to 175,000, said thermoplastic elastomer having less than 0.1 wt% diblock S-I;

- (b) from 90 to 125 parts by weight of a petroleum resin tackifier having a softening point in the range of from 85°C to 105°C, said resin being a Friedel Crafts Copolymer comprising:
- (i) a petroleum feed comprising C<sub>5</sub> olefins and C<sub>5</sub> diolefins or a mixture of C<sub>5</sub> and C<sub>6</sub> olefins and diolefins, said feed being obtained from the cracking of petroleum feedstock, copolymerized with
  - (ii) from 5 to 15% by weight, based on component (i), of one or a mixture of monovinyl aromatic compounds having 8-9 carbon atoms;
- (c) 0 or 0.5 to 15 parts by weight per hundred parts by weight of the block copolymer (a) of an extender oil which is an aromatic, naphthenic or paraffinic oil or mixtures thereof

said composition characterised as having a melt viscosity at 175°C of less than 100,000 mPa·s as measured by ASTM-D3236:

to a temperature in the range of from 150°C to 200°C

- B) applying a coating of said melt to the surface of a tape at a speed greater than 500m/min to form a coated substrate; and
- C) cooling said coated substrate."

Claim 1 of the first auxiliary request reads as follows:

"1. A hot melt pressure sensitive adhesive composition containing a mixture of:

- (a) 100 parts by weight of a thermoplastic elastomer having the structure S-I-S wherein S is substantially a polystyrene block, I is substantially a polyisoprene block and wherein the content of polystyrene in said thermoplastic elastomer ranges from 17.5 to 19% by weight and wherein the thermoplastic elastomer has a melt flow rate of 9.7-13.8 g/10 min and a number average molecular wt of 125,000 +/- 2% or a melt flow rate of 14.5-17 g/10 min and a number average molecular weight of 110,000 +/- 2% and said thermoplastic elastomer contains 0 wt% diblock S-I;
  
- (b) from 90 to 125 parts by weight of a petroleum resin tackifier having a softening point of about 92°C and a number average molecular weight of about 1150, said resin being a Friedel Crafts Copolymer comprising:
  - (i) a petroleum feed comprising C<sub>5</sub> olefins and C<sub>5</sub> diolefins or a mixture of C<sub>5</sub> and C<sub>6</sub> olefins and diolefins, said feed being obtained from the cracking of petroleum feedstock, copolymerized with
  
  - (ii) from 8 to 10% by weight, based on component (i), of styrene;
  
- (c) 0 or 0.5 to 15 parts by weight per hundred parts by weight of the block copolymer (a) of an

extender oil which is an aromatic, naphthenic or paraffinic oil or mixtures thereof

said composition characterized as having a melt viscosity at 175°C of less than 100,000 mPa·s as measured by ASTM-D3236."

Claim 1 of auxiliary request 2 corresponds to Claim 1 of auxiliary request 1, except that the component a) was defined as follows:

"a) 100 parts by weight of a thermoplastic elastomer having the properties of V 4111 SIS or DPX 511 SIS".

Claim 1 of auxiliary request 3 differs from Claim 1 of auxiliary request 1 by the following modifications:

- the petroleum resin tackifier b) is defined as follows: "*b) from 100 to 120 parts by weight of a petroleum resin tackifier having a softening point of 92°C and a number average molecular weight of 1150, a  $M_w/M_n$  of 1.6 and an  $M_z$  of 2800 ...*"
- the following feature d) was introduced after feature c): "*d) from 0.05 to 2 parts by weight of an antioxidant*".

Claim 1 of auxiliary request 4 corresponds to Claim 1 of auxiliary request 3, except for the following modifications:

- the amount of component b) was limited to 120 parts by weight;

- the amount of the comonomer styrene (ii) was amended from "8 to 10 % by weight" to "7 to 10 % by weight".

VII. In order to support its allegation that D29 was available to the public, the Respondent/Opponent I submitted, with a letter dated 19 October 2005, a paper (hereinafter: D30) which was distributed in the course of the AFERA congress held in September/October 1993 in Dresden, ie before the first priority date of the patent. It was argued that the presentation of Mr. Jacob given at this congress and as depicted in this paper was very similar to the presentation in Munich represented by D29 and that reference was also made in D29 to this AFERA paper.

With the letter dated 15 June 2007 a newsletter from the Bobst Group (hereinafter: D31) was filed, in order to show that coating machines with a speed greater than 500m/min already existed in 1992.

The admissibility of the request submitted with the letter dated 21 June 2007 (auxiliary request 2) and also those submitted during the oral proceedings (main request, auxiliary requests 1, 3, 4) was challenged by the Respondents. It was argued that the requests were late filed and suffered from a number of new deficiencies under Articles 83, 84 and 123(2). Further, doubts as to the validity of the first priority were raised.

VIII. In the oral proceedings the Appellant conceded that D29 was available to the public in 1994, ie before the date

of the second priority, and that this document was therefore citable prior art.

IX. The Appellant's arguments presented in the oral proceedings were as follows:

(a) Admissibility of the requests

The new requests led to a simplification of the case because the claims were narrower in scope than the claims according to the old requests. They should therefore be admitted even at this late stage of the proceedings.

Furthermore, the first priority was without any doubt valid for the subject-matter of auxiliary requests 1 to 4 because component a) of the adhesive composition was limited to specific embodiments which were indicated in the application as filed and the first priority document as well.

(b) Inventive step of the subject-matter according to the main request

D29, describing a process for preparing an adhesive tape comprising the step of applying a coating of a hot melt pressure sensitive adhesive (HMPSA) at an elevated temperature to the surface of a tape substrate, was representative of the closest prior art.

Although D29 referred to HMPSA coating machines with coating speeds of up to 500m/min, the produc-

tion speeds *de facto* applied were only 350m/min (Table 1 at page 101, left column) and 400m/min (page 106, right column) and therefore considerably below the claimed minimum speed of greater than 500m/min.

By the claimed process coating speeds of even 750m/min could be reached (page 4, lines 30 to 32 of the patent specification).

Therefore, the problem to be solved was to be seen in the adaptation of known HMPSA formulations to be used with high speed coating machines.

There was no suggestion in D29 that the HMPSA formulations disclosed therein were applicable to coating machines running at speeds higher than 500m/min.

The claimed process was therefore inventive over the prior art.

X. Concerning the issues of admissibility of the Appellant's requests and inventive step the Respondents argued as follows:

(a) Admissibility of the requests

Late submission of a number of sets of claims as bases for new requests at very short notice (25 May 2007: six sets; 21 June 2007: two sets; and in the oral proceedings: four sets) in order to overcome problems which were already discussed in the opposition proceedings or well before the

date of the oral proceedings was an abuse of the appeal proceedings.

Furthermore, a number of the requests did not overcome objections raised in the written proceedings or suffered from new deficiencies which had not previously arisen. In particular the deficiencies were as follows:

Auxiliary Request 1:

The softening point and molecular weight of the petroleum resin tackifier b) were limited in Claim 1 to an unclear range of "about 92°C" and "about 1150". Apart from the fact that this characterization failed to define clear limits of the ranges, which therefore rendered the scope of the claims uncertain, problems of insufficiency arose because it was not disclosed in the patent how a component with these narrow ranges for the softening point of "about 92°C" and the number average molecular weight of "about 1150" could be prepared.

These deficiencies under Articles 84 and 83 could not be overcome by reference to the commercial product "Escorez 2203" on page 5, lines 29 to 31 of the patent specification, because no consistent characterization of this product existed in the prior art.

For instance, D29 (Table at page 102) gave a softening point of 93°C (instead of 92°C as claimed), and the Appellant indicated itself in



the letter submitted during the opposition proceedings on 26 June 2003 that three different modifications of Escorez 2203 existed, one having a number average molecular weight (Mn) of 1090, the second having an Mn of 1150 and the third having an Mn of 1130 (Table at page 3 of the letter).

The definition of component b) merely by a softening point of 92°C and an Mn of 1150 was also an inadmissible generalization contrary to Article 123(2) EPC, because these values were disclosed in the application as filed (page 5, lines 8 to 14 of the WO-A 95/16755) only in conjunction with other specific data, ie a Gardner Color of 3, a styrene content of 7-10%, a weight average molecular weight (Mw) of 1840, a ratio Mw/Mn of 1.6 and a viscosity average molecular weight (Mz) of 2,800.

Doubts further existed as to the validity of the first priority for the claimed subject-matter. The indication that the amount of component c) is either 0 parts by weight or from 0.5 to 15 parts by weight (emphasis by the Board) was not disclosed in the first priority document.

Auxiliary Request 2:

Claim 1 of auxiliary request 2 was unclear, simply because component a) was merely defined by the trade names "V4111 SIS" or "DPX 511 SIS", which by itself made the claim incomprehensible.

Auxiliary Request 3:

Apart from the deficiencies indicated with respect to auxiliary request 1, Claim 1 of auxiliary request 3 further suffered from the deficiency under Article 123(2) EPC that the range "from 100 to 120 parts by weight" defined for component b) was not originally disclosed. In the examples of the WO publication the values "100 phr" or "120 phr" were disclosed in conjunction with the specific tackifiers "E2203" and "Wingtack Extra". This disclosure did not allow the creation of a new range in combination with a generalization of the tackifier compound.

Auxiliary Request 4:

The objections as to lack of clarity, insufficiency, added subject-matter and non-entitlement of priority also applied as regards the subject-matter of auxiliary request 4. In addition, it was not clear, contrary to Article 84 EPC, whether the indication "from ... to 120 parts by weight" defined a range for component b), and furthermore whether there was a proper basis in the application as filed (Article 123(2) EPC) for the range of from 7 to 10 % by weight of the styrene comonomer ii).

- (b) Inventive step of the subject-matter according to the main request

A skilled person being aware of the information in the right column on page 104 of D29 that "*modern*

*HMPSA coating machines reach coating speeds of up to 500m/min which in turn requires low melt viscosity for smooth coating"* would not be put off using coating equipment having a speed greater than 500 m/min. This all the more so as D31 showed that coating machines operating at a speed of 650m/min already existed in 1992.

Furthermore, D29 pointed on page 106 to the considerably low melt viscosity of HMPSA compositions, including the petroleum resin Escorez E2203, under coating conditions in which high shear forces were present.

The claimed process was therefore obvious from D29 alone or in combination with D31.

XI. The Appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of Claims 1 to 5 of the new main request or, alternatively, on the basis of Claims 1 to 6 of auxiliary request 1, or Claims 1 to 4 of auxiliary requests 3 or 4, all filed during the oral proceedings, or Claims 1 to 9 of the second auxiliary request, submitted with the letter dated 21 June 2007.

XII. The Respondents requested that the appeal be dismissed.

### **Reasons for the Decision**

1. The appeal is admissible.
2. *Admissibility of the Requests*

## 2.1 Main Request

The amendments to several of the claims according to the main request, which was submitted by the Respondent during the oral proceedings before the Board, were initiated by objections orally raised by the Appellants with regard to the main request filed with the letter dated 21 June 2007.

These objections in particular concerned formal aspects, ie the incorrect category of Claim 3, the incorrect back-references in the dependent Claims 3 to 5 and the inadmissibility of Claim 6 under Rule 57a EPC. All formal deficiencies were remedied by the amendments made.

Furthermore a discussion of the validity of the first priority became redundant in the light of the new main request because the Respondent no longer contested the non-entitlement to the first priority and admitted that D29 was citable prior art.

Under these circumstances the case became much simpler and - as regards the subject-matter of the main request - the issue of inventive step was the only point of discussion remaining in the oral proceedings.

Inventive step had already been discussed in the opposition proceedings and in the written appeal proceedings, and the amended main request did not give rise to any further matters which the Respondents were not in a position to address.

The Board therefore exceptionally admitted the late filed main request into the proceedings.

## 2.2 Auxiliary requests 1 to 4

Auxiliary requests 1, 3 and 4 were submitted during the oral proceedings and auxiliary request 2 was filed with the letter dated 21 June 2007.

Contrary to the argument of the Appellant, no such simplification of the case occurs by the late filing of these requests.

As the Respondents convincingly argued in the oral proceedings (see point X.(a) above) the amended requests - if they were admitted - would require discussion of new issues including clarity (Article 84 EPC), insufficiency (Article 83 EPC), added subject-matter (Article 123(2) EPC) and validity of the first priority, none of which had previously arisen in the written proceedings and which the Respondents were not in a position to address.

Because the Board and the parties could not reasonably be expected to deal with these new issues without adjournment of the proceedings - which contravenes the principle of procedural economy - auxiliary requests 1 to 4 were not admitted, in accordance with Article 10b(3) of the Rules of Procedure of the Boards of Appeal.

### 2.3 *Conclusion*

Therefore, the only request admitted into the proceedings is the new main request.

#### *Main Request*

### 3. Validity of the first priority and status of the document D29

In agreement with the Respondents, the Board takes the position that the number average molecular weight range of 50,000 to 175,000 indicated in Claim 1 for the component a) is not directly and unambiguously derivable from the previous application US 08/167,545 filed on 15 December 1993 and underlying the first priority claim, as this document discloses a range of from 50,000 to 500,000. Because, according to G 2/98 (OJ EPO 2001, 413), the interpretation of the concept of the same invention has to be strict (Reasons 5), it is the Board's position that the subject-matter of the previous application and the subject-matter claimed according to the main request do not relate to the same invention.

The priority date 15 December 1993 is therefore not validly claimed.

Consistently with the statement of Mr. Jacob in the oral proceedings before the Opposition Division (point III.), the Respondent declared in the oral proceedings before the Board that D29 was publicly available at the date of the 19th Münchener Klebstoff- und Veredelungsseminar held in October 1994.

Because Mr. Jacob is the inventor of the claimed subject-matter and the author of D29, which he distributed himself during the presentation he gave during this seminar, the Respondent's declaration is not open to doubt.

D29, which was made available to the public before the date of the second priority (28 November 1994), is therefore citable prior art.

#### 4. *Inventive step*

##### 4.1 The subject-matter of the patent in suit

The patent is concerned with the manufacture of pressure sensitive adhesive tapes by applying a coating of a hot melt pressure sensitive adhesive (HMPSA) composition in the molten state to the surface of a tape substrate. It is the aim of the invention to process a low viscosity HMPSA composition with high speed coating equipment (page 2, lines 3/4 in context with page 4, lines 28 to 32 of the patent specification).

According to the process for preparing an adhesive tape according to Claim 1:

An HMPSA composition characterised by a melt viscosity at 175°C of less than 100,000 mPas (measured by ASTM-D3236) comprising defined amounts of:

- a specific thermoplastic elastomer a),
- a specific petroleum resin tackifier b) and
- optionally an extender oil c),

- A) is heated to a temperature in the range of from 150°C to 200°C;
- B) is applied in the molten state as a coating to the surface of a tape substrate at a speed greater than 500m/min to form a coated substrate.

The coated substrate is then cooled.

#### 4.2 The closest prior art

D29 is representative of the closest prior art. As agreed by all parties, the document describes the preparation of adhesive tapes via the HMPSA coating technology by using an adhesive composition comprising 100 parts of the pure SIS triblock copolymer Vector® 4111 (as elastomer component), 100 to 130 parts per hundred parts elastomer resin (phr) of the petroleum resin tackifier Escorez® 2203 and optionally 10 phr of an extender oil (page 102, left column, point "b." and right column including the table).

All three components are embraced by the compositional characterization given in features a) to c) of Claim 1. The diagram in the right column on page 104 of D29 shows a comparison of the melt viscosities at 175°C of different elastomer-based HMPSA compositions in relation to their content of tackifier (in parts per hundred parts elastomer, phr). Inter alia, Brookfield viscosity curves for combinations V 4111/Resin 1, V 4111/Resin 2 and V 4111/E2203 - the latter being a composition according to Claim 1 - are depicted and show that the V4111/E2203 formulation according to the invention has a melt viscosity in the claimed range of below 100,000.



The passage in the first paragraph of the right column on page 104 of D29 points to the relation between the melt viscosity of the HMPSA composition and the coating speed of HMPSA machines. It is stated that coating speeds of up to 500m/min require low melt viscosities for smooth coatings at practical temperatures of 170 to 180°C.

D29 therefore indicates, at least implicitly, that HMPSA compositions of low melt viscosity are processable on coating machines running at speeds of 500m/min, from which the processing speed of the claimed process differs only in that it exceeds 500m/min.

#### 4.3 The problem to be solved and solution

In the light of the above, the problem to be solved is seen in the provision of an HMPSA tape coating process which can be operated at coating speeds in excess of those exemplified in D29. The solution to this problem as represented by Claim 1 is characterised by subjecting known HMPSA coating compositions - appropriately selected from those embraced by D29 having regard to the rheological requirements of high speed coating - to coating speeds greater than 500m/min.

#### 4.4 Obviousness

In the board's judgment, this measure is obvious from D29 itself.

According to the section on pages 106/107 of D29:  
"Viscosity At Coating Shear Rates", including figure 18, the HMPSA composition based on V 4111/E2203 has the lowest viscosity under high shear coating conditions when compared with HMPSA compositions on the basis of V4111 and tackifier resins 1 or 2.

Because high speed tape coating processes require low viscosities - as emphasised on page 104 (see above) - the disclosure in D29 unambiguously teaches that HMPSA compositions based on Vector® 4111 and Escorez® 2203, which meet the compositional requirements of Claim 1 of the main request, are best suited for high speed coating.

Therefore, the Board considers that a skilled person intending to prepare adhesive tapes via HMPSA coating on high speed coating machines, for instance those with a speed of 650m/min as described in D31 (left column on page 20/34), would - as a matter of course - choose HMPSA compositions based on Vector® 4111 and Escorez® 2203.

In view of the above considerations and in the absence of any indication which would motivate a skilled person to believe that 500m/min represents an insurmountable speed limit for the HMPSA compositions according to D29, the Appellant's argument (point VIII b)) that only coating speeds of 350m/min and 400m/min were applied in practice, cannot alter the Board's conclusion. Normal technical advances leading to higher operation speeds regularly require formulation adaptations of the materials processed and skilled persons are used to look for prior art recipes which appear the most

promising to meet the new challenges. As long as no distinctive peculiarities emerge, this activity, which supposedly underlies the claimed subject-matter, is a routine task not involving inventive skill.

The main request is therefore not allowable.

**Order**

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

The appeal is dismissed.

The Registrar

The Chairman

G. Röhn

P. Kitzmantel