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Datasheet for the decision of 2 October 2024

Case Number: T 1573/22 - 3.3.03

Application Number: 16703681.3

Publication Number: 3247758

IPC: C09J123/08

Language of the proceedings: EN

Title of invention:
METALLOCENE POLYOLEFIN BASED LOW ACTIVATION TEMPERATURE HEAT SEAL HOT MELT ADHESIVE

Patent Proprietor:
Bostik, Inc.

Opponents:
Borealis AG
Henkel AG & Co. KGaA

Relevant legal provisions:
EPC Art. 83, 54, 56
RPBA 2020 Art. 12(4)

Keyword:

Sufficiency of disclosure - (yes)
Novelty - (yes)
Inventive step - (yes)
Amendment to case - admitted (no)

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Case Number: T 1573/22 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 2 October 2024

Appellant: (Opponent 1)	Borealis AG Trabrennstrasse 6-8 1020 Vienna (AT)
Representative:	Kador & Partner Part mbB Corneliusstraße 15 80469 München (DE)
Appellant: (Opponent 2)	Henkel AG & Co. KGaA Henkelstrasse 67 40589 Düsseldorf (DE)
Representative:	Henkel AG & Co. KGaA CLI Patente 40191 Düsseldorf (DE)
Respondent: (Patent Proprietor)	Bostik, Inc. 11320 Watertown Plank Road Wauwatosa, Wisconsin 53226 (US)
Representative:	Bandpay & Greuter 11 rue Christophe Colomb 75008 Paris (FR)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 4 May 2022 rejecting the oppositions filed against European patent No. 3247758 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	D. Semino
Members:	D. Marquis
	A. Bacchin

Summary of Facts and Submissions

I. The appeals lie against the decision of the opposition division rejecting the oppositions against European patent No. 3 247 758.

II. Claim 1 as granted read as follows:

"1. A low activation temperature hot melt adhesive for packaging applications, comprising:

a) 50% to 90% by weight of a metallocene catalyzed polyolefin polymer having: a density of 0.900 g/cc or less according to ASTM D792; a melt enthalpy of 70 Joules/gram or less; and a melt index of 1 g/10 min to 35 g/10 min as measured in accordance with ASTM D1238 for 10 min with a weight of 2.16kg, and at 190°C.;

b) 5% to 50% by weight of a tackifying resin;

c) 0.5% to 40% by weight of a wax;

d) 0.1% to 5% by weight of a stabilizer or antioxidant; and

wherein the adhesive has an activation temperature of 71.1°C (160°F) or less, and has a viscosity of greater than 50,000 mPa·s at 148.8°C (300°F) and wherein the metallocene catalyzed polyolefin polymer is a copolymer of ethylene or propylene with C_4 to C_{10}-alpha-olefins".

III. The following documents were *inter alia* submitted during the opposition proceedings:

D4: US 2010/0256274 A1

D5: ExxonMobil EXACT™ 8230 Plastomer for Polymer Modification; http://www.matweb.com/search/

datasheet.aspx?matguid=515789d0cdc247b987f da73478e8b221 &ckck=1 MatWeb Exact 8230

D7: WO 2009/074450 A1

D8: US 5 530 054

D9: WO 2012/052429 A1

D10: Your Guide to Heat Activated Adhesives: https:// www.strouse.com/biog/heat-activated-adhesives

D12: US 4 427 744

D14: WO 2012/149391 A1

IV. The decision under appeal, as far as it is relevant to the present appeal concluded that the subject-matter of granted claim 1 was sufficiently disclosed, was novel over D4 and D7 and involved an inventive step starting from D4, D7 or D14 as the document representing the closest prior art.

V. Both opponents (opponent 1/appellant 1 and opponent 2/ appellant 2) lodged an appeal against the decision of the opposition division.

VI. The patent proprietor (respondent) submitted 27 sets of claims as auxiliary requests 1-27 with the reply to the statements of grounds of appeal.

VII. Oral proceedings before the Board were held on 2 October 2024.

VIII. The final requests of the parties were as follows:

- The appellants requested that the decision under appeal be set aside and that the patent be revoked.

- The respondent requested that the appeals be dismissed or that the patent be maintained on the basis of the claims of any of the auxiliary requests 1-27 submitted with the reply to the statements of grounds of appeal.

IX. The parties' submissions, in so far as they are pertinent, may be derived from the reasons for the decision below. The disputed points concerned the question of sufficiency of disclosure, novelty and inventive step of the subject-matter of granted claim 1 over D4 and D7, inventive step of the subject-matter of granted claim 1 over D14 and the admittance into the proceedings of an objection of lack of inventive step in view of D8 or D9 as the closest prior art.

Reasons for the Decision

Main request (claims as granted)

1. Sufficiency of disclosure

1.1 Claim 1 as granted concerns a low activation temperature hot melt adhesive for packaging applications. The question of sufficiency of disclosure, in the present case, was whether the skilled person could obtain these hot melt adhesives based on the disclosure of the patent in suit and taking into account the common general knowledge in the field.

1.2 The opposition division concluded (decision under appeal, section 14) that the features related to the viscosity and the activation temperature characterizing the low activation temperature hot melt adhesive in granted claim 1 were sufficiently disclosed.

1.3 As to viscosity, it was concluded that, while the patent in suit did not disclose a measurement method for the viscosity, the skilled person knew how to measure that viscosity with any method known in the art. Even if it was known that the viscosity value of a given composition depended on the method chosen, that did not constitute a lack of sufficient disclosure (decision under appeal, sections 14.1 and 14.2).

1.4 The appellants contested that conclusion in appeal. Appellant 1 argued that a viscosity of greater than 50,000 mPa.s at 148.8°C was essential to the preparation of a low activation temperature heat seal hot melt adhesive suitable for coextrusion which was an inherent part of the problem underlying the invention (statement of grounds of appeal of appellant 1, item 2.2). Without a method for the measurement of the viscosity the skilled person would be at a loss when trying to reproduce the hot melt adhesive according to the contested patent and determine whether the produced adhesive was able to solve the problem or not.

1.4.1 With respect to the viscosity of the hot melt adhesive, paragraphs 12 and 13 of the patent in suit suggest that the range of about 50,000 mPa.s or more measured at a temperature of 148.8°C can be achieved by adjusting the amounts of the components in the hotmelt adhesive in particular through a high load of polymer in the adhesive. In particular, paragraph 12 refers to the viscosity of the hotmelt adhesive being in the range of about 50,000 mPa.s or more measured at a temperature of 148.8°C while paragraph 13 provides ranges of amounts for each of the components of the hotmelt adhesive which, in combination, would lead to the required viscosity. These ranges of amounts of the components of

the adhesive are the same as those defined in granted claim 1 and it is also apparent that all the exemplified compositions for which the viscosity of the hot melt adhesive is given in the examples of the patent in suit (comparative and inventive hot melt adhesives) have a viscosity at 148.8°C well above 50,000 mPa.s. The Board therefore finds that the patent in suit teaches that in order to prepare low activation temperature heat seal hot melt adhesives with a viscosity of greater than 50,000 mPa·s at 148.8°C the amounts of the components a) to d) present in the adhesive must be chosen within the ranges defined in claim 1 and points to the key role of the amount in polymer in the adhesive. Moreover, the respondents did not provide facts showing that the skilled person would have required more information than what is disclosed in the patent in suit in order to achieve the required range of viscosities. The Board therefore concludes that considering the guidance provided in the patent in suit there is no reason to conclude that a skilled person would not be able to prepare compositions as defined in granted claim 1 with a viscosity of greater than 50,000 mPa·s at 148.8°C.

1.4.2 It was not disputed in appeal that the lack of a method for the measurement of the viscosity in the patent in suit would not prevent the skilled person from obtaining a measurement of that viscosity by any *ad hoc* method known in the field. It was also acknowledged that the value of the viscosity obtained after measurement could possibly depend on the method chosen, resulting in a lack of accuracy of the determination of the viscosity. That lack of accuracy, however, can be an issue of sufficiency of disclosure if it is shown that it is such that it would have prevented the skilled person from obtaining the claimed subject

matter, in the present case from obtaining a low activation temperature hotmelt adhesive as defined in granted claim 1.

1.4.3 In this respect, as mentioned above, appellant 1 argued that the viscosity was paramount in providing an adhesive suitable for coextrusion and that the lack of accuracy of its determination constituted a lack of sufficiency of disclosure since the skilled person would not be in the position to perform the coextrusion. The coextrusion of the adhesive as part of the problem underlying the invention is, however, not defined in granted claim 1 and as such it is not relevant to the question of sufficient disclosure of that claim. Moreover, no evidence was provided to support the allegation of appellant 1. In view of this, the Board finds that any lack of accuracy in the determination of the viscosity as defined in granted claim 1 may at most concern the clarity of the claim (which is not a ground of opposition), but does not constitute a lack of sufficiency of disclosure of present granted claim 1.

1.5 The opposition division also concluded that the activation temperature as defined in granted claim 1 was sufficiently disclosed because the activation temperature was a parameter known to the skilled person and figure 4 and paragraphs 14 and 35 of the patent in suit provided guidance as to the measurement of the parameter (decision under appeal, section 14.3). The appellants contested that conclusion in appeal.

1.6 The activation temperature is not defined in granted claim 1 nor in the specification of the patent in suit. The respondent, however, laid out in their rejoinder that the activation temperature was a known parameter

in the field of hotmelt adhesives defined as the minimum temperature starting from which an actual adhesive bond can be formed, because the adhesive had sufficiently melted and wetted the opposite substrate (page 3, fourth paragraph). That definition implies that the adhesive becomes active when the bonding performance becomes such that the tackyness of the adhesive allows a minimum bond with a given substrate. It follows that a low activation temperature hotmelt adhesive must have a temperature at which the adhesive is activated and becomes tacky, which also implies that there is a range of temperatures below the activation temperature for which the adhesive is not tacky and a range above the activation temperature for which the adhesive is tacky. This definition corresponds to that used by the opposition division in the decision under appeal (section 14.3), is in agreement with the literary meaning of the term, and no reason can be found in the prior art cited in appeal to adopt a different reading. On that basis, this definition is also adopted by the Board in the present decision.

1.7 The appellants nevertheless contended that since granted claim 1 referred to packaging applications and the patent in suit (paragraph 8) disclosed that this implied that the hotmelt adhesives of granted 1 had to display a peel force of at least 175 newtons per meter, this condition was relevant to determine the activation temperature. It is, however, apparent from the specification of the patent in suit that the passages cited by the appellant mentioning peel force requirements of the adhesives in fact concern specific packaging applications that are not part of granted claim 1. Indeed, paragraphs 8 and 37 of the patent in suit disclose that the requirements concerning the activation temperature and a peel force of at least 175

N per meter are needed for "some lidding applications" and paragraph 13 mentions that the adhesive should have a minimum peel force of 175 N per meter in the context of packaging food and other consumer goods. Since granted claim 1 is not defined by those specific types of applications, the Board finds that granted claim 1 does not limit the hotmelt adhesives by a minimum peel force necessary to determine the activation of the adhesive. Also, the figures of the patent in suit which show that the inventive adhesive compositions have a peel force above 175 N per meter at a temperature of 71°C cover only specific examples of the patent in suit (inventive examples 1-6) which are as such not limiting for the subject matter of granted claim 1.

1.8 Taking into account the definition of the activation temperature in paragraph 1.6 above, the patent in suit discloses the preparation of hotmelt adhesive compositions and provides conditions for their preparation (paragraphs 38 and 39, Tables 2-4) and shows in Figures 1-4 that these hotmelt adhesive compositions display some adhesion (peel force above 0 N per meter) at a temperature of 71°C, meeting therefore the condition on the activation temperature defined in granted claim 1. No evidence was provided in appeal showing that these hotmelt adhesives could not be achieved using the information contained in the patent in suit or that the guidance given in the patent in suit would not be sufficient to obtain adhesives according to granted claim 1.

1.9 The appellants further argued at the oral proceedings before the Board that since the adhesive composition of example 2 of D4 and D7 contained components in amounts that fell under the definition of the components a)-d) of granted claim 1, it should be concluded that either

the composition of D4 and D7 had an activation temperature of 71.1°C or less as defined in granted claim 1 or sufficient guidance on how to prepare the compositions of granted claim 1 was lacking in the patent in suit. The respondent, however, plausibly argued that the composition of example 2 of D4 and D7 contained a significant amount of plasticizer (15 wt.-%) which was known to increase the tackyness of the compositions, as shown by the fact that the composition of example 2 was disclosed as being also tacky at low temperatures (paragraph 54). While the use of plasticizers was not excluded from granted claim 1, this additive would only be used in small amounts and on the contrary waxes were preferred in order to suppress tackyness in the compositions. In view of this, the Board finds that the argumentation of the respondent plausibly shows why the composition of example 2 of D4 and D7 and the compositions of granted claim 1 differ in their adhesive properties.

1.10 The Board therefore finds that it has not been established that granted claim 1 lacked sufficiency of disclosure.

2. Novelty

2.1 The opposition division came to the conclusion that the granted claims were novel over example 2 of D4 and example 2 of D7. That conclusion was disputed by the appellants.

2.2 Examples 2 of D4 and D7 (paragraph 49 of D4 and page 14 of D7) disclose an identical composition comprising 50 parts of an ethylene/1-octene copolymer (Exact 8230), 30 parts of a tackifier resin, 3 parts of an ethylene/ethyl acrylate/MSA terpolymer (Lotader 8200), 2 parts

of paraffin wax and 15 parts of a plasticizer (Vistanex PAR 1300). The table in paragraph 52 of D4 (page 15 of D7) also discloses that the composition has a viscosity of 68,000 mPa.s at 190°C.

2.3 It was not disputed that the commercially available compound Exact 8230 was an ethylene/1-octene copolymer falling under the definition of component a) in granted claim 1. Also, it was not disputed that the viscosity of the composition (68,000 mPa.s at 190°C) disclosed in example 2 of D4 and D7 was according to granted claim 1. It is, however, apparent, as pointed out in the decision under appeal (sections 19.2 and 19.4), that D4 and D7 did not disclose the activation temperature of the adhesive composition, nor the presence and amount of a stabilizer as defined in granted claim 1.

2.4 The appellants contended that the presence of a stabilizer in an amount of 0.1 to 5% in example 2 of D4 and D7 was implicit (statement of grounds of appeal of appellant 1, sections 3.9-3.10; statement of grounds of appeal of appellant 2, section 2 starting on page 15) and that the activation temperature of that composition would be according to granted claim 1 (statement of grounds of appeal of appellant 1, sections 3.4-3.8; statement of grounds of appeal of appellant 2, section 3 starting on page 16). The Board, however, does not find any evidence on file that would support these arguments.

2.5 While appellant 1 argued that D4 disclosed the presence of a stabilizer in its paragraph 30, appellant 2 argued that D5 showed that the commercially available copolymer Exact 8230 already contained a stabilizer.

2.5.1 Paragraph 30 of D4 (corresponding to the passage in the middle of page 9 of D7) only discloses the possible presence of stabilizers/antioxidants in the general compositions of D4 ("They are conventionally added to the hot-melt adhesive in quantities of up to 3 wt.%, preferably in quantities of for instance 0.1 to 1.0 wt. %"). There is in that passage no disclosure of a compulsory presence of these additives in the hot melt adhesives of D4 and therefore it cannot be derived from that passage that the composition of example 2 of D4 and D7 necessarily contained stabilizers/antioxidants in an amount of 0.1-3 wt.-%.

2.5.2 Appellant 1 also argued that the teaching in paragraph 30 of D4 could be read in combination with the disclosure in example 2 of D4 because it was commonly known that resins were prone to oxidation. According to consistent case law of the Boards of appeal, however, different passages in a document can only be combined if there is a clear and unmistakable teaching combining them in the prior art document (Case Law of the Boards of Appeal, 10th Edition 2022, I.C.4.2). That "clear and unmistakable teaching" is missing in D4. The passage in paragraph 30 in particular mentions a possible but not necessary presence of stabilizers in the composition. Moreover, it discloses a general range of amounts for the stabilizers (up to 3 wt.-%) but a selection would still have to be made within that range when it is applied to the composition of example 2 of D4 and D7 in order to fall within the range of 0.1% to 5% by weight while maintaining the amounts of the other components within the ranges of granted claim 1. This is especially critical for the ethylene/1-octene copolymer (Exact 8230) (50 wt.-% in example 2) which is at the edge of the range disclosed in granted claim 1 for component a) (50-90 wt.-%). In view of this, the Board

cannot conclude that the teaching of paragraph 30 in D4 and D7 can be read in combination with the composition of example 2 so as to arrive at a composition with all components according to granted claim 1 in the foreseen amounts.

2.5.3 It was also argued on the basis of the datasheet D5 that the commercially available polyolefin Exact 8230 used in example 2 did contain a thermal stabilizer. The amount of that thermal stabilizer in the product Exact 8230 is, however, not disclosed in D5 and as a result it cannot be ascertained that the amount of thermal stabilizer in the hot melt adhesive composition of example 2 of D4 and D7 was according to granted claim 1 (0.1-5 wt.-%).

2.5.4 The Board therefore finds that it has not been shown that the composition disclosed in example 2 of D4 and D7 contained a stabilizer or antioxidant in an amount of 0.1-5% by weight as required in granted claim 1.

2.6 The appellants also considered that the adhesive composition of example 2 of D4 and D7 would have an activation temperature of less than 71.1°C. In particular it was argued that since the patent in suit taught that the polyolefin was key to the activation temperature and the polyolefin in example 2 of D4 and D7 was according to component a) of granted claim 1, it followed that the adhesive of D4 and D7 necessarily had an activation temperature according to granted claim 1. Furthermore, the presence of a plasticizer in the composition example 2 of D4 and D7 would not impact the activation temperature, since granted claim 1 did not exclude the presence of a plasticizer.

2.6.1 The Board, however, finds that the wording used in granted claim 1 ("low activation temperature hot melt adhesive") is in itself limiting for granted claim 1 in that it requires that there is at least a range of temperatures below the defined threshold of 71.1°C for which the adhesive does not form adhesive bonds with a substrate (see point 1.6 above).

2.6.2 The appellants argued that any polyolefin according to the definition of component a) in granted claim 1 having a melt index and melt enthalpy in the ranges defined therein would lead to a hot melt adhesive composition having an activation temperature in the range of granted claim 1. The Board finds no evidence that would support that argument. Paragraph 14 of the patent in suit pertains to the definition of the polyolefin and discloses that the polyolefin polymer, or blend of polyolefin polymers should have a melt index of 1 g/10 min to 35 g/10 min (ASTM D1238, 10 min, 2.16kg, at 190°C) and a melt enthalpy of 70 Joules/gram or less and that the melt index and melt enthalpy properties of the polyolefin polymer are keys to the lower activation temperatures of the adhesive. While the wording of that passage indicates that the selection of the melt index and melt enthalpy within the specific ranges given is necessary to produce a hot melt adhesive having an activation temperature of 71.1°C or less, it does not mean that that selection alone is sufficient to achieve the required activation temperature. The Board therefore finds that it cannot be concluded from that passage that the mere selection of any polyolefin falling under the definition of component a) of granted claim 1 would necessarily lead to a hot melt adhesive with an activation temperature of less than 71.1°C. This is especially relevant to the adhesive composition disclosed in example 2 of D4 and

D7 since that composition contains, beyond the ethylene/1-octene copolymer (Exact 8230) falling under the definition of component a) in granted claim 1, other components (15 parts of a plasticizer and 3 parts of an ethylene/ethyl acrylate/MSA (Lotader 8200)) for which it was not shown that they would not influence the adhesive behaviour and therefore the presence of an activation temperature of the hot melt adhesive.

2.6.3 Appellant 1 further argued that the reference to "hotmelt" in D4 and D7 (claim 1) referred to an adhesive composition that needed to be melted to become tacky which meant that the hotmelt adhesive compositions of D4 and D7 had an activation temperature. Since the hotmelt adhesive compositions of D4 and D7 were disclosed as being tacky at room temperature, the compositions, including that of example 2, could therefore be seen as having an activation temperature below room temperature and therefore below 71.1°C as required in granted claim 1. The Board, however, finds no evidence that the hotmelt compositions of D4 and D7 have an activation temperature at all, that is a temperature above which a non-tacky composition would become tacky. Appellant 1 in particular showed that paragraphs 3 and 41 of D4 or page 1, second paragraph and page 11, second paragraph of D7 referred to a material described as being tacky without reference to an activation temperature. Moreover it is apparent from the adhesive tests made in D4 and D7 (paragraphs 51-54 in D4; last paragraph of page 14 and first paragraph of page 15 in D7) that films obtained from the compositions of the examples of D4 and D7 (examples 1-3) displayed a good adhesion at -10°C and at 25°C which suggests that these compositions are tacky at temperature of down to -10°C. In view of this, the Board cannot conclude that D4 and

D7 imply that the compositions it discloses, and therefore that of example 2, have an activation temperature, let alone one that would be 71.1°C or less as required in granted claim 1.

2.7 The Board therefore finds that it cannot be concluded that the adhesive composition of example 2 of D4 and D7 contains a stabilizer or antioxidant in an amount of 0.1% to 5% by weight and has an activation temperature of less than 71.1°C as required in granted claim 1. As a consequence granted claim 1 is novel over the composition of example 2 of D4 and D7.

3. Inventive step

3.1 The opposition division concluded in their decision that granted claim 1 involved an inventive step over D4, D7 or D14 taken as the documents alternatively representing the closest prior art. These conclusions are challenged in appeal.

3.2 D4/D7 as closest prior art

3.2.1 The objection starting from D4 or D7 as the closest prior art relied on two distinguishing features of the subject matter of granted claim 1, namely the presence of 0.1-5 wt.-% of a stabilizer or antioxidant in the adhesive composition and the activation temperature being less than 71.1°C. It was thereby apparent that the objections in view of D4 or D7 were made considering the composition of example 2 of D4 or D7 as the starting point in D4 or D7, in accordance with the arguments summarized in the decision under appeal (sections 27.2). In view of the analysis of novelty in the section above, the Board agrees with the selection of the starting point and the identification of the

distinguishing features.

3.2.2 Starting from the composition of example 2 of D4 or D7, the first question is to determine whether the patent in suit provided evidence of an effect linked to the distinguishing features over D4 or D7. In this respect, it was undisputed that the distinguishing features over D4 or D7 were independent from one another so that their effects on the composition could be addressed separately.

3.2.3 The patent in suit does not provide comparative examples showing an effect for the use of 0.1-5 wt.-% of stabilizer or antioxidant defined in granted claim 1 that would go beyond their expected function of stabilizing the adhesive composition. Since D4 and D7 already disclose the possible use of up to 3 wt.-% of stabilizer in adhesive compositions in paragraph 30, the use of such a stabilizer in the composition of example 2 of D4 and D7 is seen as being obvious. It is apparent that the amounts of the other compositions of the composition of example 2 have to be adapted as a result of the addition of up to 3 wt.-% of stabilizer to the composition but that is not beyond the normal skills of a skilled person, for instance by adjusting the amounts of wax or plasticizer according to the generic ranges disclosed in paragraphs 21 or 29 of D4 or page 6, second paragraph and page 8, last paragraph to page 9, first paragraph of D7.

3.2.4 The opposition division established from the patent in suit that the selection of a hotmelt adhesive having an activation temperature below 71.1°C would lead to a reduction of process constraints such as burning and provide blocking resistance below the activation temperature (section 27.3).

The presence of effects linked to the activation temperature was contested by the appellants in appeal. It was in particular argued that the reduced process constraints and burning were only meaningful by comparison to other heat activatable hotmelt adhesives of the prior art having a higher activation temperature, e.g. above 82°C and therefore lacked relevance in view of D4 and D7, and that the patent in suit did not show any blocking resistance.

In view of this, the appellants formulated the problem relating to the activation temperature as the provision of alternative hotmelt adhesives.

Even considering the problem formulated by the appellants, the Board finds that a skilled person would not have arrived at the subject matter of granted claim 1 starting from the composition of example 2 of D4 and D7. The compositions of D4 and D7, and in particular that of example 2 chosen as a starting point, have not been shown to possess an activation temperature, that is a temperature above which a non-tacky material starts to form bonds with a substrate and therefore become tacky. It is thus apparent that D4 and D7 primarily concern a class of adhesives different from that of the patent in suit, namely pressure sensitive adhesives (paragraphs 2, 3 and 45 in D4; first and second paragraphs of page 1 and passage bridging pages 12 and 13 in D7) while the patent in suit specifically concerns heat activatable hotmelt. While it can be accepted that these two classes of adhesives are not necessarily mutually exclusive, as shown in D10 (page 3, fifth paragraph) and in D12 (claim 1), the Board finds no hint in D4 and D7 towards heat activatable adhesives and no motivation to adapt the composition of

example 2 such that it displays an activation temperature of 71.1°C or less without loosing the tackyness required for its application as pressure sensitive adhesive, in particular as resealable film (paragraph 45 in D4 and passage bridging pages 12 and 13 in D7).

3.3 The Board therefore finds that granted claim 1 is inventive over D4 or D7 taken as the closest prior art document. The same conclusion applies to granted claims 10 (article comprising the adhesive of granted claim 1) and 16 (method of making the article of claim 10 comprising coextrusion) which refer to the adhesive of granted claim 1.

3.4 D14 as closest prior art

3.4.1 The opposition division also concluded that granted claim 1 involved an inventive step over D14 chosen as the closest prior art. That conclusion is contested by appellant 1.

3.4.2 The assessment of inventive step over D14 in the decision under appeal (section 28.2) relied on the disclosure of D14 as a whole, which also seems the line of attack followed by appellant 1 in appeal (statement of grounds of appeal, sections 4.15 to 4.17). It is, however, apparent from the description of D14 that several selections must be performed within the disclosure of D14 in order to arrive at the composition considered in section 4.16 of the statement of grounds of appeal of appellant 1, namely the choice of polyolefin produced with a metallocene catalyst ("in one embodiment", first paragraph, page 6), the melt index and heat of fusion (first full paragraph on page 7), the amount of polyolefin (last paragraph, page 7),

the presence and amount of a tackifying resin (first paragraph on page 12), the presence and amount of an antioxidant (passage bridging pages 8 and 9). Even the disclosure of claims 1, 4, 9, 11 and 12 considered by appellant 1 (statement of grounds of appeal, first full paragraph on page 20) requires four selections within claims 4, 9, 11 and 12, which are all dependent on claim 1, to arrive at a combination of components falling under the definition of components a)-d) according to granted claim 1 but which still does not disclose the viscosity and the heat activation temperature of the adhesive.

3.4.3 The argumentation of appellant 1 with respect to the activation temperature relied on the disclosure on page 7, lines 7-13 of a generic propylene copolymer having ranges of melt index (7-3000 dg/10 min) and heat of fusion (30-80 J/g) which overlap with the ranges of melt index and melt enthalpy defined for component a) in granted claim 1 (statement of grounds of appeal, sections 4.16 and 4.17). As discussed above in point 2.6.2, the melt index and melt enthalpy of component a) are disclosed as key parameters in obtaining a hotmelt adhesive having an activation temperature of 71.1°C or less (patent in suit, paragraph 14). These parameters however are not said to be sufficient to obtain an activation temperature as defined in granted claim 1. In view of this, it cannot be concluded from the passage on page 7, lines 7-13 of D14 that the generic propylene copolymer disclosed therein would necessarily lead to an adhesive having the required activation temperature.

3.4.4 Appellant 1 did not further show in their argumentation on inventive step (statement of grounds of appeal, sections 4.18-4.21) how a skilled person starting from

D14 could arrive at a hotmelt adhesive composition with an activation temperature of 71.1°C or less as defined in granted claim 1 and no additional arguments were provided at the oral proceedings before the Board on that point. The Board therefore does not see how it could be concluded on the basis on the arguments of appellant 1 that granted claim 1 is obvious when starting from D14 as the document representing the closest prior art.

3.5 Granted claim 1 therefore satisfies the requirement of Article 56 EPC when considering document D14 as the closest prior art. The same conclusion applies to granted claims 10 (article comprising the adhesive of granted claim 1) and 16 (method of making the article of claim 10 comprising coextrusion) which refer to the adhesive of granted claim 1.

3.6 Admittance

3.6.1 Appellant 2 further presented objections of lack of inventive step starting from either D8 or D9 as the closest prior art in appeal (statement of grounds of appeal, section IV.2). It was not disputed at the oral proceedings before the Board that these objections were new to the appeal proceedings. These objections therefore constitute an amendment of the case of appellant 2 whose admittance is at the discretion of the Board (Article 12(4) RPBA). Appellant 2 did not provide any reason or justification for the admittance of the objections of lack of inventive step starting from either D8 or D9 into the appeal proceedings. Since no reason was given for filing this objection only at the appeal stage, no proper substantiation was provided and since, if admitted, the objections would undoubtedly increase the complexity of the present

case, the Board decided not to admit the new objections of lack of inventive step starting from either D8 or D9 into the appeal proceedings.

4. As none of the objections of the appellants which are in the proceedings is successful, the appeals are to be dismissed.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

D. Hampe D. Semino

Decision electronically authenticated