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Datasheet for the decision of 20 May 2020

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Application Number: 04753154.6

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Language of the proceedings: EN

Title of invention:
MOISTURE CURING REACTIVE POLYURETHANE HOT MELT ADHESIVES MODIFIED WITH ACRYLIC POLYMERS

Patent Proprietor:
Henkel AG & Co. KGaA

Opponent:
Klebchemie M.G. Becker GmbH & Co. KG

Relevant legal provisions:
EPC Art. 56, 123(2)

Keyword:
Inventive step - (no) Main request and auxiliary requests I-III
Amendments - allowable (no) Auxiliary requests IV-VII

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Case Number: T 1316/17 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 20 May 2020

Appellant: (Patent Proprietor)	Henkel AG & Co. KGaA Henkelstrasse 67 40589 Düsseldorf (DE)
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Representative:	Büchel, Edwin Patentanwälte Isenbruck Bösl Hörschler PartG mbB Eastsite One Seckenheimer Landstraße 4 68163 Mannheim (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 10 April 2017 revoking European patent No. 1631608 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	O. Dury
Members:	D. Marquis
	R. Cramer

Summary of Facts and Submissions

I. The appeal by the patent proprietor lies from the decision of the opposition division revoking European patent No. 1 631 608.

II. A notice of opposition against the patent was filed in which revocation of the patent was requested.

III. The decision of the opposition division to revoke the patent for lack of inventive step of the main request filed during the oral proceedings and lack of inventive step of auxiliary requests 1 to 5 filed with letter of 10 February 2017 was announced at the oral proceedings on 13 March 2017.

IV. Claim 1 of the main request read as follows:

"1. A moisture curable polyurethane hot melt adhesive composition prepared by reacting:
a) a polyisocyanate;
b) a polyol;
c) a high molecular weight acrylic polymer having a weight average molecular weight of 80,000 to 250,000 g per mole; and
d) a low molecular weight acrylic polymer having a weight average molecular weight of 5,000 to 60,000 g per mole."

Claim 1 of auxiliary request 1 corresponded to claim 1 of the main request in which the upper value defining the range of weight average molecular weight of the low molecular weight acrylic polymer d) was amended to "40,000 g per mole".

Claim 1 of auxiliary request 2 corresponded to claim 1 of the main request in which the range defining the weight average molecular weight of the low molecular weight acrylic polymer d) was amended to "10,000 to 30,000 g per mole".

Claim 1 of auxiliary request 3 corresponded to claim 1 of the main request in which the following feature was added at the end of the claim: "wherein aliphatic C_5-C_{10} terpene oligomers are not contained".

Claim 1 of auxiliary request 4 corresponded to claim 1 of auxiliary request 1 in which the following feature was added at the end of the claim: "wherein aliphatic C_5-C_{10} terpene oligomers are not contained".

Claim 1 of auxiliary request 5 corresponded to claim 1 of auxiliary request 2 in which the following feature was added at the end of the claim: "wherein aliphatic C_5-C_{10} terpene oligomers are not contained".

V. The following documents were *inter alia* part of the opposition procedure:

D8: WO 03/006522
D12: WO 02/102916
D14: Comparative examples filed by the opponent with letter of 23 February 2012
D15: Comparative examples filed by the opponent with letter of 13 February 2017
D17: Experimental report filed by the patent proprietor with letter of 10 February 2017

VI. The decision of the opposition division, as far as it is relevant to the present decision, can be summarized

as follows:

Main request

- D12 represented the closest prior art and within that document sample A of example 1 was a suitable starting point for the assessment of inventive step. Claim 1 differed from said sample A in that it was based on a high molecular weight acrylic polymer having higher weight average molecular weight selected in the range of 80,000-250,000 g/mol.

- There was no evidence that the choice of the higher weight average molecular weight of the acrylic polymers in the range of 80,000-250,000 g/mol resulted in a technical effect.

- The experimental reports D14 and D15 showed that the products obtained in D12 had in fact a better open time than the moisture curable polyurethane hot melt adhesives according to claim 1 of the main request.

- The experimental data reported in D17 showed that open time of the adhesives of D12 could be improved by modification with respect to their acrylic polymer weight distribution. However, since the compositions reported in D17 were very specific, it could not be concluded that the weight average molecular weights of the claimed acrylic polymers had a technical effect.

- The problem was thus to provide alternative polyurethane/acrylic polymer-based hot melt

adhesives.

- The skilled person would have considered adjusting the weight average molecular weight distribution of the higher molecular weight acrylic polymers in order to provide alternative polyurethane/acrylic polymer-based hot melt adhesives. Claim 1 of the main request lacked inventive step.

Auxiliary requests 1 and 2

- The limited ranges of weight average molecular weights relating to the acrylic polymers defined in claim 1 of auxiliary requests 1 and 2 was not associated with any effect. The reasoning provided for inventive step of the main request applied to auxiliary requests 1 and 2.

Auxiliary request 3

- The exclusion of terpenes from claim 1 of auxiliary request 3 was not shown to result in any effect. The reasoning of inventive step of the main request applied to auxiliary request 3.

Auxiliary requests 4 and 5

- The reasoning of inventive step of the main request applied to auxiliary requests 4 and 5. These requests therefore lacked an inventive step.

VII. The patent proprietor (appellant) lodged an appeal against that decision and, together with its statement of grounds of appeal, filed a main request and auxiliary requests I-VII.

- The main request corresponded to the main request dealt with in the contested decision.

- Auxiliary requests I to III corresponded to auxiliary requests 1, 3 and 4, respectively, forming the basis of the contested decision. Auxiliary requests IV to VII were new to the appeal proceedings.

- Claim 1 of auxiliary request IV corresponded to claim 1 of the main request in which the range defining the weight average molecular weight of the high molecular weight acrylic polymer c) was amended to "114,000 to 162,400 g per mole", the range defining the weight average molecular weight of the low molecular weight acrylic polymer d) was amended to "18,000 to 26,900 g per mole" and the following feature was added at the end of the claim "wherein the adhesive has a viscosity of 7,800 to 26,250 cP at 120°C".

- Claim 1 of auxiliary request V corresponded to claim 1 of auxiliary request IV in which it was added at the end of the claim "and wherein aliphatic C5-C10 terpene oligomers are not contained".

- Claim 1 of auxiliary request VI corresponded to claim 1 of auxiliary request IV in which the weight average molecular weight of the high molecular weight acrylic polymer c) was amended to "114,000 g per mole" and the weight average molecular weight of the low molecular weight acrylic polymer d) was amended to "18,000 or 26,000 or 26,900 g per mole".

- Claim 1 of auxiliary request VII corresponded to claim 1 of auxiliary request VI in which it was added at the end of the claim "and wherein aliphatic C5-C10 terpene oligomers are not contained".

VIII. The opponent (respondent) filed a rejoinder to the statement of grounds of appeal.

IX. Oral proceedings were held on 20 May 2020 in the presence of both parties.

X. The appellant's arguments, insofar as relevant to the decision, may be summarised as follows:

Main request - Inventive step

- D12, which referred to reactive polyurethane adhesives containing an acrylic resin and had improved green strength, could be seen as the closest prior art. Sample E or H of D12 were better starting points than sample A for the assessment of inventive step in particular since sample E was a conventional adhesive, as shown in D8, and sample H did not contain a polyester polyol that had an influence on the open time and viscosity of the composition. Sample A was not the most promising starting point within D12 since that sample was a comparative example for which the application viscosity was higher than for any other examples of D12 and also higher than the viscosity of the compositions of the patent in suit. In addition, the compositions according to example 1 of D12 to which sample A belonged contained hydroxyl functionalized acrylates which also had an influence on the properties of the composition and

in particular its adhesiveness and viscosity. Starting from sample A of D12 was therefore hindsight since that document taught a lowering of the composition viscosity.

- Nevertheless, should sample A of D12 be considered as starting point, it disclosed, in comparison with claim 1 of the main request, a mixture of two low molecular weight acrylic polymers. A comparison of examples 6 with 7 and 6 with 8 of the patent in suit showed that the compositions according to claim 1 of the main request had improved open times at reasonable application viscosities. D17 also showed the presence of an effect by comparison to sample E according to D12. Therefore, should sample A be selected as starting point, the problem was to provide moisture curable reactive hot melt adhesive compositions that had an improved open time at a reasonable application viscosity.

- There was no motivation in the prior art to use a high molecular weight acrylic polymer as defined in claim 1 of the main request in the composition of sample A of D12. In particular, the skilled person starting from sample A of D12 was taught that the composition already contained a high molecular weight acrylic polymer and there was no motivation to add or replace the already employed high molecular weight acrylic polymer with an acrylic polymer having a higher molecular weight according to claim 1 of the main request. The use of higher molecular weight acrylic polymers would, according to the expectation of the skilled person, increase even more the viscosity of the system and would go against the teaching of D12. That trend was shown in D15. Claim 1 of the main request thus involved

an inventive step over D12.

Auxiliary requests I-VII

- The arguments in favour of inventive step of claim 1 of the main request equally applied to claims 1 of auxiliary requests I-VII. There were no further arguments provided for these requests as far as inventive step was concerned.

- The modifications made in claims 1 of auxiliary requests IV-VII found a basis in the examples of the patent in suit, in particular samples 7-10, 12-16 and 18-24. Claims 1 of auxiliary requests V and VII also contained a disclaimer which was based on the paragraph bridging pages 10 and 11 of the application and was, according to decision G 2/10, admissible.

XI. The respondent's arguments, insofar as relevant to the decision, may be summarised as follows:

Main request - Inventive step

- Any of sample A or sample H of D12 could be used as starting point for the assessment of inventive step of the main request. The presence of an aliphatic C_5-C_{10} oligomer as additive in the compositions of D12 was not relevant since that additive was also considered in the patent in suit. Claim 1 of the main request differed from the composition of sample A of D12 in the molecular weight of the high molecular weight acrylic polymer.

- There were no examples in the patent in suit or in D17 showing a direct comparison of compositions

according to claim 1 of the main request with the composition according to sample A of D12. D15 however showed that compositions according to claim 1 of the main request were not improved over the composition of sample A of D12. The problem was the provision of an alternative moisture curable polyurethane hot melt adhesive composition.

- The solution provided in the patent in suit was not inventive over D12 which already taught the use of high molecular weight acrylic polymers. Claim 1 of the main request lacked inventive step.

Auxiliary requests I-VII

- Claims 1 of auxiliary requests I-VII lacked inventive step for the same reasons as claim 1 of the main request.

- The modifications made in claims 1 of auxiliary requests IV-VII did not find a basis in the application as originally filed.

XII. The appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form according to the main request or any of the auxiliary requests I-VII filed with the statement of grounds of appeal.

XIII. The respondent requested that the appeal be dismissed.

Reasons for the Decision

Main request

1. Objections of lack of sufficiency of disclosure and lack of novelty in view of D8 were pursued by the respondent in appeal. In view of the negative conclusion reached on all requests as to the requirements of Articles 56 or 123(2) EPC however, it is not necessary for the Board to decide on sufficiency of disclosure and novelty over D8.

2. Inventive step

2.1 The object of the patent in suit is to provide moisture curable reactive hot melt adhesive compositions that have long open time and/or high green strength at a reasonable application viscosity (paragraph 5).

2.2 D12 concerns a polyurethane hot melt adhesive having improved green strength (claims 1 and 8). D12 is seen as the closest prior art by both parties in appeal and forms the basis of the contested decision on inventive step. The Board sees no reason to deviate from D12 as document representing the closest prior art.

2.3 Within D12, the polyurethane hot melt adhesive of sample A of example 1 was seen by the opposition division as a suitable starting point for the assessment of inventive step. That part of the decision was contested by the appellant who considered that the assessment of inventive step starting from the composition of sample A was based on hindsight since that composition was a comparative example of D12 and the compositions according to samples E or H of D12 were more relevant and therefore represented more

appropriate starting points than the composition according to sample A.

2.4 The composition of polyurethane hot melt adhesive of sample A of example 1 in D12 is prepared by reacting methyl diisocyanate, a polyether polyol (PolG 20-56), an hexanediol adipate copolyester (Dynacoll 7360), a urethane bisoxazolidine (Hardener OZ), an acrylic defoamer (Modaflow) and two acrylic polymers, namely Elvacite 2016 (a non-functional acrylic polymer; weight average molecular weight 65,000 g/mol) and Elvacite 2967 (hydroxyl functional acrylic polymer; weight average molecular weight 20,000 g/mol).

2.5 That composition was thus prepared by reacting, among other components, a polyisocyanate, a polyol and an acrylic polymer of weight average molecular weight 20,000 g/mol that corresponds to the low molecular weight acrylic polymer according to claim 1 of the main request. The composition is disclosed as a reactive hot melt formulation on page 12 of D12 and it was not disputed that the composition of sample A was an adhesive composition that was also moisture curable.

2.6 The question with respect to the composition of sample A of D12 was whether that composition would have been considered by the skilled person as a viable prior art moisture curable polyurethane hot melt adhesive composition. The appellant argued in that respect that the composition according to sample A of D12 would not have a reasonable (low) application viscosity as required in the patent in suit (statement setting out the grounds of appeal point II.3.1).

2.7 The patent in suit and in particular the passage in paragraphs 4 and 5 does however not define what a

skilled person would understand under a reasonable (low) application viscosity. There is also no teaching in D12 that could lead to the conclusion that the composition according to sample A would not have an application viscosity that was not "reasonable". It has in particular not been shown why the composition of sample A of D12 which had a viscosity of 34,100 cP at 121°C would not be relevant to claim 1 of the main request while the patent in suit discloses compositions having viscosities close to that and even higher than that of the composition of sample A of D12 (25,600 cP, 26,250 cP and 43,500 cP at 120°C in the case of samples 12, 14 and 17 of the patent in suit).

2.8 In that respect also, and contrary to the point made by the appellant in the statement setting out the grounds of appeal, the patent in suit does not define suitable application viscosities as viscosities in the range of 7,000 to 22,000 cP at 120°C. On that basis, it cannot be concluded that the composition of sample A of D12 would not be a viable moisture curable polyurethane hot melt adhesive composition on the grounds that its application viscosity would be too high. In fact, the composition of sample A of D12 was apparently usable as a moisture curable polyurethane hot melt adhesive since the dynamic peel rate at 50°C of that adhesive is reported in Table 1 of D12.

2.9 It was also argued at the oral proceedings that the composition of sample A of D12 was not a reasonable starting point since that composition contained a polyester polyol and an hydroxy functional acrylic polymer, both of which would be known to have an influence on the properties of the composition, in particular its green strength and its viscosity. The presence of a polyester polyol or an hydroxy functional

acrylic polymer, alone or in combination with one another, are however not excluded from claim 1 of the main request and there is no teaching in the patent in suit against the use of these two components in a moisture curable polyurethane hot melt adhesive composition. On the contrary, the description implies in paragraph 37 (polyester polyol) and in paragraph 26 (hydroxy functional acrylic monomer to prepare an acrylic polymer) that these components can be present in the compositions of the patent in suit. The argument of the appellant on that point is therefore rejected.

2.10 Under these circumstances, the Board concludes that sample A of D12 is a reasonable starting point within D12 even though it is a comparative example.

2.11 The appellant argued that samples E and H were more relevant than sample A of D12 and that therefore the problem solution approach should be carried out starting from samples E and H instead of sample A. It has however been established above that sample A of D12 was a reasonable starting point for the assessment of inventive step. It is also constant case law of the Boards that the rationale of the problem solution approach in that situation requires that the inventive step be assessed relative to all reasonable starting points, in the present case therefore also relative to sample A of D12, before inventive step can be acknowledged (Case Law of the Boards of Appeal, 9th Edition, July 2019, I.D.3.1). In that regard, the question that must be answered is not whether samples E or H or D12 are more relevant than sample A but whether claim 1 of the main request involves an inventive step starting from sample A of D12.

2.12 The composition of sample A of D12 does not contain an acrylic polymer having a weight average molecular weight in the range of 80,000-250,000 g/mol. Claim 1 of the main request thus differs from the disclosure of sample A of D12 only in the use of a high molecular weight acrylic polymer having a weight average molecular weight in the range of 80,000-250,000 g/mol instead of an acrylic polymer with a molecular weight of 65,000 g/mol (Elvacite 2016).

2.13 With regard to the weight average molecular weight of Elvacite 2016 disclosed in D12, it was submitted in the statement setting out the grounds of appeal that it was 60,000 g/mol and not 65,000 g/mol as disclosed in the examples of D12. That argument was not pursued by the appellant at the oral proceedings in appeal nor does the Board see a reason to do so, in particular since D8 (page 13) and the patent in suit itself (paragraph 54) both disclose the value of 65,000 g/mol for Elvacite 2016. In addition, as may be seen hereinafter, that issue is not relevant for the present decision.

2.14 As regards the problem, its definition should normally start from the technical problem actually described in the application (Case Law, supra, I.D.4.3.2). The object of the patent in suit is to provide moisture curable reactive hot melt adhesive compositions that have long open time and/or high green strength at a reasonable application viscosity (paragraph 5). The appellant considered in their statement of grounds of appeal (section II.3.2, top of page 4; section 3.3, third paragraph from the bottom) that the problem effectively solved over D12 resided in the provision of moisture curable polyurethane hot melt adhesive compositions having improved open time.

2.15 With regard to sample A as starting point within D12, the patent in suit does not contain a direct comparative example showing the presence of an effect resulting from the use of an acrylic polymer with a weight average molecular weight in the range of 80,000 g/mol to 250,000 g/mol. In particular, the compositions of samples 6, 7 and 8 in Table 5 of the patent in suit that were cited by the appellant as basis for an effect do not only differ from one another in the characterizing feature over claim 1 of the main request, namely the use of a high molecular weight acrylic polymer having a weight average molecular weight in the range of 80,000-250,000 g/mol, but in other aspects of the composition as well like the amounts in acrylic polymers, the amount in polyol and the amount in methyl diisocyanate.

2.16 The appellant argued that the differences in the amounts of acrylic polymers, polyol and methyl diisocyanate of the compositions in the examples 6-8 of the patent in suit would not affect the properties listed in Table 6 in a significant way without however providing any support for that assertion. The argument of the appellant is also contradicted by the differences in the properties of compositions according to claim 1 of the main request that are reported in Table 8 for samples 12 and 13 as well as samples 14 and 15. The compositions according to samples 12 and 13 (or samples 14 and 15) only differ from one another in the concentrations of the two acrylic polymers of the compositions. The differences in viscosity at 120°C, open time and dynamic peel at 32.5°C between samples 12 and 13 as well as samples 14 and 15 are substantial, showing that differences in at least the amount in acrylic polymer do influence the properties of the compositions in a significant way. In that regard, it

cannot be deduced from these examples that any effect reported for these examples in Table 6 of the patent in suit unambiguously results from the characterizing feature over the closest prior art.

2.17 By contrast, the experimental report D15 submitted by the respondent contains a fair comparison of compositions, one according to sample A of D12 ("Beispiel A" of D15, containing Elvacite 2016 with a weight average molecular weight of 65,000 g/mol and Elvacite 2967 with a weight average molecular weight of 20,000 g/mol) and the other representing the composition according to claim 1 of the main request ("Beispiel B" of D15, containing Elvacite 2971 with a weight average molecular weight of 100,000 g/mol and Elvacite 2967). Since these two compositions only differ from one another in the weight average molecular weight of the high molecular weight acrylic polymer, their properties can be meaningfully compared. In particular, D15 shows that a composition analogous to that of sample A of D12 has a higher open time and a lower viscosity than a composition according to claim 1 of the main request.

2.18 A further experimental report was submitted by the appellant in appeal (D17) for which it was not disputed that the comparisons provided therein were not relevant to sample A of D12 as starting point since none of the compositions disclosed in D17 could be seen as representing the composition according to sample A of D12. In that regard, D17 does not show that the characterizing feature of claim 1 of the main request over the composition of sample A of D12 provides an effect.

2.19 Under these circumstances, it cannot be concluded that the problem identified by the appellant is solved over the whole scope of claim 1 of the main request. Rather, in view of the above, the problem effectively solved can only be held to reside in the provision of further moisture curable polyurethane hot melt adhesives.

2.20 It remains to be determined whether the solution to the problem posed was obvious in view of the prior art, that is whether the skilled person starting from sample A of D1 would have considered that the use of an acrylic polymer of molecular weight between 80,000 and 250,000 g/mol would lead to further moisture curable polyurethane hot melt adhesives.

2.21 With regard to that question, the first full paragraph on page 2 of D12 is particularly relevant since it provides a general teaching about the prior art that "the performance of reactive hot melt adhesives for most applications may be substantially improved by the incorporation of acrylic polymers into conventional polyurethane adhesives, in particular reactive hydroxy-containing and non-reactive acrylic copolymers" which corresponds to the composition of sample A containing both an hydroxy functional acrylic polymer of molecular weight 20,000 g/mol (Elvacite 2967) and a non-reactive acrylic polymer of molecular weight 65,000 g/mol (Elvacite 2016).

2.22 Further to that teaching, in the same paragraph, D12 indicates that "Improvement in green strength may be obtained by adding higher molecular weight polymers (reactive or not) [...]". Since the improvement of the green strength and its solution was known in the prior art and is also the object of D12, the Board finds that it would have been obvious to expect that the use of

acrylic polymers of high molecular weight would at least lead to further moisture curable polyurethane hot melt adhesives.

2.23 With regard to the numerical range defining the "higher" molecular weight of the acrylic polymer, D12 does not provide specific values but it defines the term low molecular weight in the context of acrylic polymers in D12 as a range of approximately 2,000 to 50,000 g/mol. It can reasonably be derived from that definition that a high molecular weight acrylic polymer would be a polymer with a molecular weight of at least 50,000 g/mol. Since it has not been established that the range of 80,000 to 250,000 g/mol defined in claim 1 of the main request was associated to any effect, it can only be considered as an arbitrary choice within the broader range of "above 50,000 g/mol" derivable from D12.

2.24 It was also argued by the appellant that the use of an acrylic polymer of higher molecular weight in the composition of sample A of D12 would lead to an increase of the composition viscosity (as shown in D15) that would run against the teaching of D12. However, it has first not been shown that an increase in the viscosity of the composition would prevent a use of that composition as moisture curable polyurethane hot melt adhesive composition. It is also derivable from the properties disclosed in D15, which is cited by the appellant at this juncture, that a composition comprising Elvacite 2971 of molecular weight 100,000 g/mol instead of Elvacite 2016 as in sample A of D12 can at least be used as an adhesive composition. Therefore, the appellant's argument is not persuasive.

2.25 Under these circumstances, claim 1 of the main request lacks an inventive step in view of D12.

Auxiliary requests I-III – Inventive step

2.26 The arguments of inventive step in respect of auxiliary requests I to III were indicated by the appellant to be the same as the ones submitted for the main request.

2.27 Claim 1 of auxiliary request I differs from claim 1 of the main request in that the upper value of the range defining the weight average molecular weight of the low molecular weight acrylic polymer was amended from 60,000 g/mol to 40,000 g/mol. Since Elvacite 2967 present in the composition of sample A of D12 and which corresponds to the low molecular weight acrylic polymer according to claim 1 of the main request has a weight average molecular weight of 20,000 g/mol, the amendment performed in claim 1 of auxiliary request I does not constitute a further distinguishing feature over the closest prior art (as compared to the main request). It has also not been shown that that limitation would, in combination with the other features of claim 1, result in any further effect. Consequently, the reasoning and the conclusion laid out above for claim 1 of the main request apply equally for claim 1 of auxiliary request I. Auxiliary request I therefore lacks an inventive step.

2.28 Claim 1 of auxiliary request II differs from claim 1 of the main request in that the composition is said not to contain aliphatic C_5-C_{10} terpene oligomers. Since the composition of sample A of D12 does not contain such a component, the amendment performed in claim 1 of auxiliary request II does not constitute a further distinguishing feature over the closest prior art (as

compared to the main request). In that regard, the reasoning and the conclusion laid out above for claim 1 of the main request apply equally for claim 1 of auxiliary request II. Auxiliary request II therefore lacks an inventive step.

2.29 Claim 1 of auxiliary request III differs from claim 1 of the main request in that i) the upper value of the range defining the weight average molecular weight of the low molecular weight acrylic polymer was amended from 60,000 g/mol to 40,000 g/mol and ii) the composition is said not to contain aliphatic C_5-C_{10} terpene oligomers. Since none of these two features added in claim 1 of auxiliary request III constitutes a distinguishing feature over the closest prior art, the reasoning and the conclusion laid out above for claim 1 of the main request apply equally for claim 1 of auxiliary request III. Auxiliary request III therefore lacks an inventive step.

Auxiliary requests IV-VII – Amendments

2.30 In claim 1 of auxiliary request IV, the upper and lower values defining the numerical ranges of molecular weights of the high and low molecular weight acrylic polymer components c) and d) and the added definition of the adhesive viscosity by a numerical range were said to be based on individual values of these parameters as disclosed in samples 7-10, 12-16, and 18-24 of the application as originally filed. These samples however correspond to specific compositions disclosed in the application as originally filed that were prepared by reacting specific acrylic polymers in specific amounts and having properties and that all correspond to commercially available products. It is thus apparent that the compositions of the samples

cited as basis for the amendments in claim 1 of auxiliary request IV are more specific than the definition present in that claim. Claim 1 of auxiliary request IV thus results from an intermediate generalisation of a set of compositions of the patent in suit for which there was no basis in the application as originally filed which leads to the conclusion that claim 1 of auxiliary request IV infringes the requirements of Article 123(2) EPC.

Since claim 1 of auxiliary request V contains the same definition of the ranges of weight average molecular weights of the low and high molecular weight acrylic polymers and viscosity as claim 1 of auxiliary request IV, the conclusion reached for the auxiliary request IV also applies to auxiliary request V.

2.31 In claims 1 of auxiliary requests VI and VII the molecular weights of the high and low molecular weight acrylic polymer components c) and d) are defined by a combination of individual values taken from the samples 7-10, 12-16, and 18-24 of the application as originally filed as well as by a numerical range of the adhesive viscosity generalized from these samples. Even if the individual values of the molecular weights of the high and low molecular weight acrylic polymer components can be found in some samples of the application as originally filed (samples 7, 8 and 12-15) claims 1 of auxiliary requests VI and VII result, for the same reasons as outlined above in respect of auxiliary request IV, from an intermediate generalization of samples 7-10, 12-16, and 18-24 of the application as originally filed which disclose compositions prepared by the reaction of specific commercially available compounds. These specific examples do not form a proper basis for the generalizations present in claims 1 of

auxiliary requests VI and VII. Auxiliary requests VI and VII therefore do not meet the requirements of Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

B. ter Heijden O. Dury

Decision electronically authenticated