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Datasheet for the decision of 26 July 2022

Case Number: T 1570/19 - 3.2.05

Application Number: 11734113.1

Publication Number: 2601025

IPC: B29B9/12, B01J2/30, B29K101/12, B29C48/21, C09J9/00, B29B9/06

Language of the proceedings: EN

Title of invention:
Free-flowing pressure sensitive adhesives

Patent Proprietor:
Henkel AG & Co. KGaA

Opponent:
H. B. Fuller Company

Relevant legal provisions:
EPC Art. 54(2), 54(3), 56, 83, 84, 89, 123(2)
RPBA Art. 12(4)

Keyword:

Amendments - main request - added subject-matter (no)
Clarity - main request - not open to examination
Late-filed objection - admitted (yes)
Sufficiency of disclosure - main request (yes)
Partial priority (yes)
Novelty - main request (no) - auxiliary request (yes)
Inventive step - auxiliary request (yes)

Decisions cited:

G 0003/14, G 0001/15, T 0472/92, T 0097/94, T 0074/98, T 1186/05, T 0234/09, T 2451/13

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Case Number: T 1570/19 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 26 July 2022

Appellant: (Opponent)	H. B. Fuller Company 1200 Willow Lake Boulevard P.O. Box 64683 St. Paul, Minnesota 55164-0683 (US)
Representative:	Maiwald Patent- und Rechtsanwaltsgesellschaft mbH Elisenhof Elisenstraße 3 80335 München (DE)
Respondent: (Patent Proprietor)	Henkel AG & Co. KGaA Henkelstraße 67 40589 Düsseldorf (DE)
Representative:	Viering, Jentschura & Partner mbB Patent- und Rechtsanwälte Hamborner Straße 53 40472 Düsseldorf (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 9 April 2019 concerning maintenance of the European Patent No. 2601025 in amended form.**

Composition of the Board:

Chairman	P. Lanz
Members:	B. Spitzer
	A. Bacchin

Summary of Facts and Submissions

I. The opponent lodged an appeal against the interlocutory decision of the opposition division finding that European patent No. 2 601 025 (the patent) as amended according to auxiliary request 1 filed on 10 January 2019 met the requirements of the EPC.

II. The opposition was filed against the patent as a whole on the basis of the grounds for opposition under Article 100(a) EPC (lack of novelty and lack of inventive step) and Article 100(b) EPC.

III. In the decision under appeal, the opposition division found that the ground for opposition under Article 100(b) EPC prejudiced the maintenance of the patent as granted and that auxiliary request 1 fulfilled the requirements of the EPC.

IV. Requests

The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed (main request) or, alternatively, that the decision under appeal be set aside and that the patent be maintained as amended on the basis of auxiliary request 1, filed as auxiliary request V with the reply to the statement of grounds of appeal, or on the basis of auxiliary request 2, filed as auxiliary request VII with the reply to the statement of grounds of appeal, or on the basis of auxiliary request 3, filed as auxiliary request IV with the reply to the

statement of grounds of appeal.

V. The oral proceedings before the board took place on 26 July 2022.

VI. The following documents are cited in this decision.

D1: Certified copy of the priority document of the patent in suit, EP 10171866.6, filed 4 August 2010
D3: WO 2012/123282 A1, published 20 September 2012
D4: ExxonMobil data sheet of low density polyethylene resin LD 655
D5: US 6 238 732 B1
D6: Technical data sheet HL 2053
D7: Technical data sheet HL 2081 XC
D9: US 6 430 898 B1
D10: US 6 716 527 B1
D15: Declaration of Mr Mark Kroll with Annexes A and B
D16: Safety data sheet RT 2730
D17: DSC measurement
D19 Declaration of Mr Kevin Burge with Annex C
D20: Loop tack measurements by the respondent
D21: Technical data sheet REXtac® APAO RT2880
D22: Technical data sheet VESTOPLAST® 750
D23: Technical data sheet Vistamaxx™ 8780
D24: Technical data sheet Licocene® PE 4201
D25: Technical data sheet Sasolwax C80

VII. Claim 1 of the main request (corresponding to auxiliary request 1 as filed on 10 January 2019 on which the decision under appeal is based) has the following wording (with the feature numbering used by the parties in square brackets):

"**[1.1]** Hot melt pressure sensitive adhesive **[1.2]** in form of pellets **[1.3]** having a weight of less than 5 g each and **[1.4]** comprising a core of a pressure sensitive adhesive material **[1.5]** comprising at least one polymer selected from polyester, polyacrylate, polyolefin, polyurethane, ethylene vinyl acetate polymers, styrene block copolymers or mixtures, **[1.6]** at least one tackifier and optionally additives, **[1.7]** the adhesive material has a softening point of 80 to 150°C and a tacky surface at 25°C, **[1.8]** wherein each pellet of adhesive has an outer shell consisting of a polymeric film and **[1.9]** is manufactured by a co-extrusion process, whereby
[1.10] a) the film forming material comprises a thermoplastic polymer with a melting point of less than 120°C,
[1.11] b) the film forming material of the shell comprises wax, in an amount of less than 20 wt-%,
[1.12] c) each pellet being completely surrounded by the polymeric film, and
[1.13] d) the film is applied as continuous film,
[1.14] so that the pellets have a non-blocking surface."

VIII. Claim 1 of auxiliary request 1 is based on claim 1 of the main request, with feature 1.11 reformulated as "b) the film forming material of the shell comprises wax, in an amount of up to 15 wt-% wax" and feature e) added after feature d) reading: "and e) the film forming

material is selected from polyethylene, polypropylene, polyester, poly-acrylate, ethylene vinyl acetate polymer, styrene block copolymers or blends optionally containing up to 15% of at least an oil,"

The further auxiliary requests are not relevant to the present decision and are therefore not reproduced.

IX. The parties' submissions relevant for this decision can be summarised as set out below.

(a) Main request - added subject-matter

(i) Appellant

Amended feature 1.11 contained added subject-matter. According to the decision under appeal, this amendment was directly and unambiguously disclosed in claim 4 as originally filed and on page 9, second paragraph (see also decision under appeal, Reasons, point 16.2). The passage on page 9, second paragraph of the application as originally filed mentioned "low molecular weight wax like materials". This was not the same as wax since there was wax with a high molecular weight. Furthermore, "wax like materials" included not only wax but other materials. Consequently, there was no direct and unambiguous disclosure of the obligatory presence of wax.

(ii) Respondent

The objection under Article 123(2) EPC was unfounded since claim 4 as originally filed provided a basis for amounts of less than 20 wt-% wax. Moreover, the passage on page 9 related to wax like materials, which included waxes, and stipulated that a certain amount of wax

could preferably be present in the film forming material.

(b) Main request - clarity

(i) Appellant

The term "wax like materials" was not clear. In contrast to the opposition division's opinion (see decision under appeal, Reasons, point 16.2), "wax" was not more specific than "wax like materials"; "wax like materials" also comprised alternative materials to wax.

(ii) Respondent

The requirements of Article 84 EPC were met. The term "wax like materials" was clear and included waxes.

(c) Main request - admittance of new objection on sufficiency of disclosure

(i) Appellant

The objection that the invention was insufficiently disclosed in the patent for low wax contents could not have been raised earlier and should be admitted. Sufficiency of disclosure was discussed in the first-instance proceedings in view of documents D15 to D17. However, only from the decision under appeal and not earlier, it was apparent that the opposition division had very narrowly interpreted the data of document D15 to apply only to film forming material compositions having no wax. This was surprising, especially when considering document D18, a test report of the patent proprietor, which included data on film forming

materials with 14 and 15 wt-% wax, far from 0 wt-%.

(ii) Respondent

The objection of insufficiency of disclosure for low wax contents presented a fresh case and a new objection. It should not be admitted since it could and should have been filed in the first-instance proceedings. In the oral proceedings before the opposition division, the objection of insufficiency of disclosure was overcome by the exclusion of a zero wax content.

(d) Main request - sufficiency of disclosure

(i) Appellant

The requirements of Article 83 EPC were not fulfilled. The functional feature "*so that the pellets have a non-blocking surface*" could not be achieved over the whole range claimed. This was shown by the examples of document D19 using an APAO polymer (REXtac® RT2730) with 1 or 2 wt-% wax (Microsere® 5799A) and confirmed by document D20, the respondent's test results. The film forming material used for the tests in document D19 fulfilled the requirements of claim 1 but did not achieve the claimed result. If a technical effect was claimed, the technical features necessary for achieving this effect would have to be claimed as well. Since this was not the case, the patent was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Such a deficiency could not be overcome by referring to the description.

As established in paragraph [0021] of the patent in

suit, the film forming material had to be non-tacky at ambient temperature. Since this essential feature was missing from claim 1, the scope of claim 1 was too broad. The result to be achieved did not only depend on the melting point of the film forming material. There were further influencing factors which were not disclosed. Additionally, the patent in suit did not contain a single embodiment. Thus, there was no guidance for the person skilled in the art on how to achieve the claimed result.

(ii) Respondent

The invention was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Only pellets with a non-blocking surface fell under the scope of claim 1. The addition of wax had, indeed, an effect on the tackiness, which was shown in the test results of document D20 (including the data sheets D21 to D25). The wax content in documents D15 and D19 was not sufficient because a polymer was used which was tacky at ambient temperature and, thus, contrary to the teaching of the patent in suit (see patent in suit, paragraph [0021]). Thus, these documents did not show that the requirements of Article 83 EPC were not met. For sufficiency of disclosure, the whole content of the patent specification had to be considered.

Detailed examples were not necessary since the patent in suit contained enough guidance for the person skilled in the art on how to achieve pellets with a non-blocking surface.

(e) Priority

(i) Appellant

The priority was claimed from patent application EP 10171866.6 (document D1). It was only validly claimed for a wax content of less than 15 wt-% (see document D1, page 8, third paragraph). Claim 8 of document D1 disclosed a wax content of "up to 15%". The term "up to" was not clear and could mean "up to and including" or "up to and excluding". As the claim would be interpreted in line with the description, where a wax content of "less than 15 wt-%" was disclosed, the term "up to" meant "up to and excluding". Consequently, the priority was only valid for a wax content of less than 15 wt-% but not for the value of 15 wt-%. Even if the term "up to" were to be interpreted as "up to and including", the value of 15 wt-% wax was only disclosed for the list of film forming materials mentioned in claim 8.

(ii) Respondent

The patent in suit was entitled to the priority claimed from patent application EP 10171866.6 (document D1) for a wax content of "up to 15%". The term "up to" usually meant "up to and including".

(f) Main request - novelty over document D3

(i) Appellant

Document D3 was prior art under Article 54(3) EPC as far as the priority of claim 1 of the main request was invalid. Document D3 disclosed all the features of

claim 1, especially features 1.10 and 1.11.

Document D3 disclosed a wax content in the film forming material of "0 to 25%", preferably "between 5 to 20%"(see document D3, page 6, fourth paragraph). On page 10 of document D3, an example for the film forming material was given, see "Hüllzusammensetzung 1" (shell composition 1). In this example, the calculated wax content was 15.07 wt-%. It was a novelty-destroying example since the calculated value of 15.07 wt-% wax lay within the claimed range including 15 to excluding 20 wt-% of claim 1 of the main request for which the priority was not validly claimed. Even if the priority was valid for a wax content of 15 wt-%, 15.07 wt-% was greater than 15 wt-% and thus also lay in the range excluding 15 to excluding 20 wt-%. The value of 15.07 wt-% could not be rounded down to 15 wt-%. The accuracy level had to be considered for each document separately. The upper limit in the priority document D1 was 15 wt-% and not 15.49 wt-%. The accuracy level in document D3 was higher. Therefore, the value of 15.07 wt-% was greater than the claimed upper limit of 25 wt-% in document D1.

"Escorene LD 655" used in this example of document D3 had the required melting point, as could be seen from data sheet D4, where the melting point was 101 °C. "Escorene" was a trade mark of ExxonMobil. Thus, data sheet D4 was the correct one as only the trade name was changed; the type of polymer, "LD 655", remained the same. It was not possible to retrieve an earlier data sheet. It might be available to the patent proprietor as document D3 was an application of the patent proprietor. Even if the composition had changed slightly, the melting temperature of 101 °C was quite far away from the claimed value of 120 °C. Thus, a

slight change of the melting temperature was negligible. Moreover, document D3 disclosed melting points of 90 to 130 °C, which covered a melting temperature of less than 120 °C (see document D3, page 6, third paragraph).

(ii) Respondent

The subject-matter of claim 1 of the main request was new over document D3 since document D3 did not disclose the melting point of less than 120 °C (feature 1.10) and a wax content of excluding 15 to excluding 20 wt-% (feature 1.11).

The appellant had failed to demonstrate that "Escorene LD 655" and "ExxonMobil LDPE LD 655" were identical resins. Consequently, the required melting point for "Escorene LD 655" could not be deduced from data sheet D4. Since document D3 also mentioned melting points up to 130 °C, higher melting points were not excluded (see document D3, page 5, third paragraph). Thus, the melting point of "Escorene LD 655" was not unambiguously less than 120 °C.

In the example "Hüllzusammensetzung 1" of document D3, the wax content was 15.07 wt-%. This value needed to be rounded to the same level of accuracy as in the priority document to allow comparison. As the priority document only mentioned integers, the values of document D3 had to also be rounded to integers. Reference was made to the case law (see Case Law of the Boards of Appeal of the European Patent Office, 10th edn., 2022, I.C.5.2.2) and decisions T 1186/05 and T 234/09. Since the priority was valid up to and including 15 wt-% and since the value of 15.07 wt-% of document D3 had to be rounded down to 15 wt-%, document

D3 did not disclose any individual value falling within the range of excluding 15 to excluding 20 wt-%. As the range itself was not disclosed in document D3 in individualised form, document D3 was not novelty-destroying.

(g) Auxiliary request 1 - novelty

(i) Appellant

The subject-matter of claim 1 of auxiliary request 1 was not new over document D5.

The features which the opposition division considered to be not anticipated by document D5 were features 1.5, part of 1.7, 1.8 to 1.10, 1.12 and 1.13 (see decision under appeal, Reasons, point 17.14). Document D5 disclosed a long list of suitable thermoplastic polymers, of which at least some were identically overlapping with those of claim 1 of auxiliary request 1 (feature 1.5). Feature 1.7 was anticipated by the adhesive materials HL-2053 (see document D5, Example 1, column 20, line 60 and data sheet D6) and HL-2081 (see document D5, Example 3, column 22, line 17 and data sheet D7). Features 1.8 and 1.12 were also anticipated by document D5 since step b) of claim 10 of document D5 disclosed that the adhesive pellets had a substantially uniform continuous coating and claim 13 of document D5 disclosed that the coating was achieved by applying a molten pelletising aid to the adhesive pellets. Contrary to the decision under appeal, no cross-linking was required (see decision under appeal, Reasons, point 17.13). Features 1.9 and 1.13 were process features and did not limit the product claim since the claimed product was a pellet having a continuous coating or a polymeric film material, whether produced by co-

extrusion or by applying a coating as described in document D5. Feature 1.10 was disclosed in document D5, column 7, lines 42 to 50: "*For low application temperature applied HMPSA's the pelletizing aid preferably becomes molten at less than 140°C., more preferably at a temperature of less than about 120°C., and even more preferably at a temperature of less than 100°C.*" The feature "*wherein the film forming material is selected from polyethylene, polypropylene, polyester, poly-acrylate, ethylene vinyl acetate polymer, styrene block copolymers or blends*" added to claim 1 of auxiliary request 1 was disclosed in column 9, lines 52 to 64 of document D5.

Document D5 disclosed all the features of claim 1 of auxiliary request 1. The respondent's cherry-picking argument failed since e.g. the claimed pellet weight was not only given for Example 2 of document D5, but reflected the usual weight assuming the common size and shape of pellets and their density lying between 1 and 2 g/cm^3.

(ii) Respondent

Document D5 did not disclose all the features of claim 1 in combination. For the pellet weight, the decision under appeal referred to Example 2, column 21 of document D5, which was the only example mentioning a pellet weight (see decision under appeal, Reasons, point 17.11). Regarding the softening point, Examples 1 and 3 were mentioned in the decision under appeal (see decision under appeal, Reasons, point 17.13). Column 6, line 65 of document D5 disclosed that the pelletising aid might be a wax and that low concentrations of wax were optional. According to column 4, line 8 of document D5, "*the pelletizing aid is preferably a*

thermoplastic materials such as a thermoplastic polymer, tackifying resin, and mixtures thereof which may comprise small concentrations of wax". Claim 4 of document D5 even led away from the claimed invention by suggesting a tackifying resin having a melting point of greater than about 120 °C as a non-blocking agent. Consequently, document D5 disclosed many possibilities, and the person skilled in the art had to make a plurality of choices. Moreover, document D5 did not disclose features 1.9 and 1.13 since it did not disclose a co-extrusion process. The co-extrusion process influenced the structural features of the product and, thus, these features were indeed distinguishing features. In short, document D5 did not clearly and unambiguously disclose all the features of claim 1 of auxiliary request 1. The subject-matter of claim 1 of auxiliary request 1 was new.

(h) Auxiliary request 1 - inventive step

(i) Appellant

The subject-matter of claim 1 of auxiliary request 1 was not inventive starting from document D9 in combination with the common general knowledge or in combination with documents D5 or D10.

Document D9 did not disclose the wax content according to feature 1.11. However, in contrast to the respondent's assertions, document D9 did not generally advise against the use of wax. Document D9 merely taught that the film forming material should not exclusively consist of wax since wax was not suitable due to the steep rise in viscosity (see document D9, column 2, lines 59 to 63). Small amounts of wax were not covered by this passage. It was not disclosed that

the film forming material should exclude small amounts of wax. In fact, it was common general knowledge for the person skilled in the art that wax was a conventional additive in adhesives and film forming materials, as disclosed in document D5, where the wax content was in the range of less than about 10 wt-% (see document D5, column 6, lines 63 to 67).

The further disputed feature of the pellet weight (feature 1.3) was redundant as pellets, due to their size, shape and density, usually had a pellet weight in the claimed range. Particles having a higher weight would not be called pellets.

A further distinguishing feature starting from document D9 was the softening point (first part of feature 1.7). A softening point of 80 to 150 °C was the normal range for pressure sensitive adhesives. Reference was made to document D9, column 3, lines 45 to 50 and column 4, lines 24 to 27, and document D5, example 1 with HL-2053 being hot melt pressure sensitive and having a softening point of 89 °C (see data sheet D6).

Reference could also be made to document D10 disclosing coated hot melt pressure sensitive adhesive pellets having an adhesive core and an outer shell.

Furthermore, none of these distinguishing features had a technical effect over the whole range claimed and had to be disregarded for inventive step.

(ii) Respondent

The subject-matter of claim 1 of auxiliary request 1 was inventive starting from document D9.

Document D9 did not disclose the pellet weight according to feature 1.3. But hot melt pressure sensitive adhesives were provided in the form of blocks (see document D9, column 1, lines 47 to 49 and column 3, lines 60 to 63).

Regarding feature 1.11, the wax content of up to 15 wt-%, document D9 taught away from using wax. The summary of document D9 disclosed that the invention was particularly useful for low viscosity thermoplastic compositions, that the viscosity of the film forming material should be equally low and that wax generally rose steeply in viscosity at low temperatures (see document D9, column 2, lines 25 to 44 and lines 45 to 65). Consequently, the person skilled in the art would have chosen a film forming material, which according to document D9 should have a low viscosity, and thus they would have avoided the use of wax.

Film forming materials comprising wax showed a technical effect, namely a decrease in tackiness, even for low wax contents. This was shown by the test results of document D20.

According to document D5, the use of wax was optional (see document D5, column 6, lines 60 to 65). Document D10 did not disclose feature 1.11. Therefore, when starting from document D9 and considering document D5 or D10, the person skilled in the art would have chosen a film forming material without wax. The skilled person would not have arrived in an obvious way at the solution according to claim 1 of auxiliary request 1.

Reasons for the Decision

1. Main request - added subject-matter

1.1 In claim 1 of the main request, the granted feature 1.11 "b) the film forming material of the shell comprises less than 20 wt-% wax" was replaced by 1.11 "b) the film forming material of the shell comprises wax, in an amount of less than 20 wt-% ~~wax~~".

1.2 The board interprets the amendment of claim 1 as follows: feature 1.11 as granted is directed to a wax content of (including) zero wt-% to less than 20 wt-%. In view of amended feature 1.11, claim 1 of the main request necessarily comprises a wax; its content can range from slightly above zero wt-% to less than 20 wt-%. Thus, the range in claim 1 of the main request is the same as the range in claim 1 as granted with the only difference that in claim 1 of the main request the lower limit of zero wt-% wax is excluded. Consequently, the relevant question is whether there is a direct and unambiguous disclosure for excluding a wax content of zero wt-%.

1.3 This amendment is directly and unambiguously disclosed in claim 4 as originally filed and on page 9, second paragraph (see also decision under appeal, Reasons, point 16.2).

Claim 4 as originally filed claims that "*the film forming material of the shell shall comprise less than 20 wt-% wax*".

Page 9, second paragraph of the application as originally filed discloses that "*[t]he film forming material can include also other additives and auxiliaries [...]. One embodiment of the invention uses a film forming material which shall contain only small amounts of less than 15 wt-% (related to the film forming material) of low molecular weight materials like wax*".

The board notes that claim 4 as originally filed provides a direct and unambiguous basis for the general wording "wax". The board does not see any added subject-matter in the exclusion of a wax content of zero wt-%, especially as the application as originally filed clearly discloses the presence of wax as optional (see application as originally filed page 9, second paragraph).

1.4 Conclusion on added subject-matter for the main request

In view of the above, claim 1 of the main request meets the requirements of Article 123(2) EPC.

2. Main request - clarity

2.1 The term "wax like materials" objected to by the appellant as unclear is used in the description (see paragraph [0023] of the patent as granted and amended according to the main request). Claim 1 as granted and claim 1 of the main request use the term "wax".

2.2 In accordance with decision G 3/14, the claims of the patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that, the amendments introduce non-

compliance with Article 84 EPC. The board observes that, compared with claim 1 as granted, only the range of the wax content was limited. This does not introduce a potential lack of clarity for the term "wax" or "wax like". Therefore, in view of the order of decision G 3/14, claim 1 of the main request is not to be examined for compliance with the requirements of Article 84 EPC in view of a potential lack of clarity of the term "wax like" used in paragraph [0023] of the patent as granted and as amended.

2.3 Conclusion on clarity

The objection against claim 1 of the main request under Article 84 EPC is not admissible in accordance with decision G 3/14.

3. Main request - admittance of new objection on sufficiency of disclosure

3.1 The board notes that the ground for opposition under Article 100(b) EPC had been raised in the notice of opposition in accordance with Article 99(1) EPC. Thus, the objection under Article 83 EPC for the main request is not a new ground for opposition but a new objection against claim 1 of the main request within the same ground for opposition.

3.2 The admittance of an objection filed for the first time in the statement of grounds of appeal or the written reply to it is governed by Article 12(4) of the Rules of Procedure of the Boards of Appeal in its version of 2007 (RPBA 2007), which applies in the current case in accordance with Articles 24 and 25(2) of the Rules of Procedure of the Boards of Appeal in its version of 2020 (RPBA 2020). In observance of this provision,

everything presented by the parties under Article 12(1) RPBA 2007 shall be taken into account by the board if and to the extent it relates to the case under appeal and meets the requirements in Article 12(2) RPBA 2007. However, the board has the discretionary power to hold inadmissible facts, evidence or requests which could have been presented or were not admitted in the first-instance proceedings.

3.3 Regarding insufficiency of disclosure of claim 1 of the current main request, the appellant states that "*the situation is not different*" compared to the patent as granted and that "*for the same reasons - claim 1 of the Auxiliary Request also does not fulfil the requirements of Article 83 EPC*" (see statement of grounds of appeal, paragraph 20).

3.4 As the arguments for insufficiency of disclosure are substantially similar for claim 1 as granted and for claim 1 of the current main request, this objection does not constitute a fresh case. The objection against claim 1 as granted was presented in the first-instance proceedings, and the opposition division dealt with it under point 14 of the Reasons for the decision under appeal.

3.5 Against this background, the board admitted the new objection under Article 83 EPC against the main request.

4. Main request - sufficiency of disclosure

4.1 The appellant referred to its test report D19 including annex C while the respondent made reference to the embodiments shown in document D20. For the appellant's experiments of document D19 resulting in a tacky

surface, an APAO polymer (REXtac® RT2730) was used as a film forming material with a wax content of 1 wt-% and 2 wt-%. REXtac® RT2730 is a polymer which by itself is already tacky. The respondent's experiments in document D20 showed a non-tacky surface for an APAO polymer (REXtac® RT2880 or Vestoplast® 750) and an ethylene-propylene-copolymer with different wax contents of, for instance, 0, 1, 3, 5 and 20 wt-%. The experiments with REXtac® RT2730 also resulted in a tacky surface for low wax contents.

4.2 The question to be answered is whether, in view of the evidence on file, the disclosure of the invention as defined in claim 1 of the main request in the patent is insufficient for it to be carried out by the person skilled in the art.

4.3 Under established case law, sufficiency of disclosure within the meaning of Article 83 EPC must be assessed on the basis of the application (or the patent) as a whole – including the description and claims - and not the claims alone (see Case Law of the Boards of Appeal of the European Patent Office, 10th edn., 2022, "Case Law", II.C.3.1). As the requirement of sufficiency of disclosure is related to the invention defined in the claims and here in particular to the combination of structural and functional features of the claimed invention, the patent as a whole has to enable a skilled person to achieve the explicitly claimed technical effect (see Case Law, II.C.3.2). In the case at issue, the technical effect is that the pellets have a non-blocking surface as defined in the claims.

4.4 The patent specification clearly teaches that the "*outside shell of the pellets is made by a film forming material comprising at least one thermoplastic*

elastomer, which is not tacky at ambient temperature at 25°C, preferably up to 45°C" (see patent specification, paragraph [0021]) and that "*the film forming material is selected from a coating or film having a non tacky surface*" (see patent specification, paragraph [0025]). Thus, taking into account the whole of the disclosure, the person skilled in the art is aware that REXtac® RT 2730, being tacky at ambient temperature, should be avoided as a material for the shell. Furthermore, in paragraphs [0021] and [0022] of the patent, a large number of examples for the film forming material is given. Therefore, the patent contains sufficient information for finding an appropriate film forming material so that the pellets have a non-blocking surface.

4.5 The appellant considered the aspect that the polymer for the film forming material is not tacky at an ambient temperature of 25 °C an essential feature missing from claim 1 of the main request. However, contrary to the appellant's allegations, this would be an objection under Article 84 EPC and not under Article 83 EPC (see Case Law, II.A.3.2.). Since the lack of this allegedly essential feature is not occasioned by the post-grant amendments, the requirements of Article 84 EPC are not to be examined in this regard (see point 2.2).

4.6 Paragraphs [0021] and [0022] of the patent in suit give a plurality of general examples of film forming materials. More detailed examples are not an absolute necessity as long as there is enough guidance so that the invention can be carried out by the person skilled in the art, which is the case here.

4.7 Conclusion on sufficiency of disclosure

In view of the above, the main request meets the requirements of Article 83 EPC.

5. Priority

5.1 Feature 1.11 of the current claim 1 is directed to a film forming material of the shell having a composition comprising wax in an amount of less than 20 wt-%. In the decision under appeal, the opposition division took the view that the patent was entitled to partial priority for the subject-matter of wax present in amounts up to 15 wt-%, however, not for amounts of greater than 15 wt-% and less than 20 wt-% (see decision under appeal, Reasons, point 17.1).

5.2 The validity of the priority claim for a hot melt pressure sensitive adhesive having a wax content below 15 wt-% in the film forming material is undisputed. The point of dissent between the parties is whether the priority is validly claimed for a wax content of 15 wt-%.

5.3 On page 8, lines 19 to 22 of the priority document (document D1), a wax content of "less than 15 wt-%" is mentioned. In addition, claim 8 of the priority application discloses the value "up to 15%" of at least an oil and/or a wax for a film forming material "*selected from polyethylene, polypropylene, polyester, polyacrylate, ethylene vinyl acetate polymer, styrene block copolymers or blends*". The board concurs with the respondent that the disclosure in the documents of the priority application as a whole covers amounts of wax less than and up to 15 wt-%. In accordance with its

common meaning, the term "up to" is interpreted by the board as "up to and including". Thus, wax amounts of 15 wt-%, as encompassed by claim 1, are disclosed in the priority document for the film forming material as listed in claim 8 of the priority document. Following the findings of decision G 1/15, claim 1 enjoys the priority date for this subject-matter in accordance with Article 89 EPC. However, the remaining subject-matter of claim 1, i.e. amounts of wax greater than 15 wt-% and less than 20 wt-%, is not disclosed in the priority document, meaning that priority cannot be validly claimed for this range. As a consequence, for the latter range, the date of filing constitutes the relevant date for the assessment of novelty and inventive step.

6. Main request - novelty over document D3

6.1 Document D3 constitutes prior art under Article 54(3) EPC for the subject-matter of claim 1 not entitled to priority. The decision under appeal found that feature 1.11 "b) the film forming material of the shell comprises less than 20 wt-% wax" was not disclosed in document D3 (see decision under appeal, Reasons, point 17.5). This is disputed by the appellant. The respondent disputes that "Escorene LD 655" as used in document D3 would have the required melting point (feature 1.10).

6.2 Feature 1.11 (wax amount)

6.2.1 Document D3 generally discloses a wax content in the film forming material of "0 to 25%", preferably "between 5 to 20%" (see document D3, page 6, fourth paragraph). On page 10 of document D3, an example of the film forming material is given (see

"Hüllzusammensetzung 1").

Hüllzusammensetzung 1:
15 g eines SEBS-Copolymeren (Kraton G 1652), 5 g eines Harzes (Escorez 5320), 15 g eines Wachses (Sasolwax H1), 20 g eines Polyethylens (Escorene LD 655), 0,05 g eines Stabilisators (Irganox 1010)und 44,5 g eines Öls (Primol 352) wurden unter Rühren bei ca. 190 °C aufgeschmolzen und homogenisiert.
Erweichungspunkt: 112 °C

or in English:
"Shell composition 1:
15 g of a SEBS-copolymer (Kraton G 1652), 5 g of a resin (Escorez 5320), 15 g of a wax (Sasolwax H1), 20 g of a polyethylene (Escorene LD 655), 0.05 g of a stabiliser (Irganox 1010) and 44.5 g of an oil (Primol 352) were melted and homogenised at about 190 °C while being agitated.
Softening point: 112 °C"

In this example, the calculated wax content is 15.07 wt-%. This value is calculated from the different components of the above "shell composition 1" given in grams. This is not contested by the respondent. Therefore, the question to be answered is whether a meaningful comparison of 15 wt-% (the upper limit of the claimed wax content covered by the priority) with the prior art disclosure identifying two decimal places (15.07 wt-%) can only be made if the prior-art values are also reduced to integer numbers, that is to say, rounded, as also suggested in the case law cited by the respondent (see decisions T 234/09 and T 1186/05).

6.2.2 The respondent argued that according to the common rules for rounding down, 15.07 was to be read as 15 and thus, priority from document D1 having been validly claimed for this value, it was not anticipated by

document D3. It was further argued that since in the context of the patent the wax content was defined as up to 15 wt-%, without any indication of decimals, the integer number 15 also included the value of 15.07, which differed from 15 only in the second decimal, hence representing a very small difference.

6.2.3 However, the board cannot accept this line of argument.

First, by just following the rounding down rules, values deviating even more from the indicated value, e.g. 15.49, would also lead to the value of 15. In the board's view, to interpret the single value of "15" to include all values that, upon application of rounding rules, would have that value as the outcome, would expand the subject-matter of the claim beyond the indicated limits, thus casting doubt upon the meaning of ranges in general (see also the reasoning in decision T 74/98, Reasons 3.2 and Case Law, I.C.5.2.2).

A second aspect to consider is the fact that the value of 15.07 is a wt-% calculated from the original composition expressed in grams (not as a percentage). In the case of "shell composition 1" of document D3, the composition consists of 15 g SEBS-copolymer, 5 g resin, 15 g wax, 20 g polyethylene, 0.05 g stabiliser and 44.5 g oil, resulting in a total weight of 99.55 g and a wax content of 15.0678051 wt-%. It is evident that any rounding down following the calculation in wt-% would affect the composition. In particular, rounding down the critical figure of 15.0678051 wt-% to 15 wt-% would imply a modification of the original weight compositions since 15 wt-% no longer corresponds to 15 g but to 14.92058824 g. Therefore, in line with the respondent's argument, there would be two different versions of the disclosed composition: the original one

expressed in gram weight and one arising from rounding down the calculated wt-%. The true meaning of a disclosure cannot be altered by the units chosen to express it.

6.2.4 The respondent alleged that the wording in claim 8 of the priority document meant "up to 15%", which included all values which after rounding down resulted in 15 wt-%, i.e. up to 15.49 wt-%. In support of this argument, the respondent invoked the approach followed in, *inter alia*, decision T 234/09.

In decision T 234/09, the board assumed that the integer value of claim 1 represented a rounded value due to the fact that the examples given in the patent specification included values given with more decimals. Consequently, the prior-art value was rounded down to an integer. The facts underlying this case are, however, not comparable to the ones at issue, where throughout the patent specification and the priority document the wax content is given as an integer value, without decimals. Thus, the board cannot apply the approach taken in decision T 234/09 and fails to see other reasons on the basis of the current patent documents for rounding the values derived from document D3 down to an integer.

6.2.5 The respondent further cited decision T 1186/05 - in which the board in question pointed out that rounding up was required - to enable two density values to be compared, each one reflecting a "true" density value having three (or more) decimal places but expressed to different degrees of accuracy, i.e. one having three and the other one having only two decimal places. Thus, the rounding exercise put the claimed and the prior-art density values at the same degree of accuracy by using

the mathematical rule existing for that purpose. This exercise had no impact on the density value as disclosed in the prior-art document.

This decision is also not pertinent for the current case since in decision T 1186/05 no conversion of units or calculation of wt-% was required. The issue at stake was the density of the same material, just given in different accuracy levels.

6.2.6 To conclude, document D3 discloses a wax content of 15.07 wt-%, which is greater than 15 wt-%, and thus feature 1.11 is anticipated by document D3.

6.3 Feature 1.10 (melting point)

6.3.1 Document D3 discloses a shell composition containing a polyethylene "Escorene LD 655" (see example 1 at page 10, "Hüllzusammensetzung 1"). Due to the lack of information in document D3 on the properties of the polyethylene used, particularly its melting point, the appellant referred to the melting point of 101 °C disclosed for the product "ExxonMobil LDPE LD 655" in post-published data sheet D4 and argued that the two compounds were the same. In the decision under appeal, the opposition division was of the opinion that "ExxonMobil LDPE LD 655" according to data sheet D4 was identical to "Escorene LD 655" used in document D3 and that the melting point of "Escorene LD 655" was sufficiently proven in view of the fact that document D3 was a document from the respondent and because the evidence for the melting point of "Escorene LD 655" was in its sole hands (see decision under appeal, Reasons, points 17.6 and 17.7). This was contested by the respondent since no evidence had been provided by the appellant that both compounds were identical and that

the composition had not changed over time.

6.3.2 The board is of the opinion that in the current case the applicable standard of proof is the balance of probabilities since the data sheet for "Escorene LD 655" used in the example of document D3 would have been available to both parties. The stricter standard of "beyond reasonable doubts" is normally applied when all evidence lies within the power of the opponent (see decision T 97/94, Reasons 5.1 and decision T 472/92, Reasons 3.1). Given that in the current case the evidence did not lie in the sole sphere of the appellant, it would not be appropriate to apply this very strict standard of proof. Evidence would have been available to the respondent to establish the contrary, namely that the melting point of "Escorene LD 655" was not in the claimed range, especially if considering that document D3 is in the name of the respondent (see Case Law, III.G.4.3. and decision T 2451/13).

6.3.3 Applying these principles to the case at hand, the board concurs with the opposition division that document D4, a data sheet of a low density polyethylene named "ExxonMobil LDPE LD 655", provides the properties of the polyethylene named "Escorene LD 655". It is common practice in the field of polymers to name compounds by a prefix designating the base polymer (here: LD low density polyethylene) and a suffix referring to the polymer composition (here: 655). "ExxonMobil" and "Escorene" are trade marks for commercially identifying available products. "Escorene" plastic materials are produced by ExxonMobil. Thus, it is highly likely that in view of their commercial designation, both compounds are identical. Regarding the fact that document D4 is post-published, the board - like the opposition division - assumes that it is

very unlikely that standard compositions substantially change over time without changing their designation. At least their major components and properties would remain unchanged. Even if additives might have changed, their effect on the melting point would be marginal. Since the value of 101 °C is far below the claimed upper limit for the melting point of 120 °C, it would still be in the range of feature 1.10.

6.3.4 In light of this, feature 1.10 of claim 1 is anticipated by document D3.

6.4 Conclusion on novelty

Since all features of claim 1 of the main request are known in combination from document D3, its subject-matter is not new (Article 54(1) and (3) EPC).

7. Auxiliary request 1 - novelty over document D5

7.1 The consistent view in the case law is that for an invention to lack novelty, its subject-matter must be directly and unambiguously derivable from the prior art (see Case Law, I.C.4.).

7.2 The board shares the respondent's view that document D5 does not directly and unambiguously disclose the subject-matter of claim 1 of auxiliary request 1. Features 1.3, 1.7 (first part), 1.10 and 1.11 are not disclosed in combination but originate from different embodiments.

Feature 1.3, the pellet weight, is only disclosed for Example 2 (see document D5, column 21, line 65). For this example, further information about the pressure sensitive material and the softening point of the

adhesive material is missing. The film forming material is a thermoplastic binder. No wax content is disclosed.

Feature 1.7 (first part) is anticipated by the adhesive materials HL-2053 (see document D5, Example 1, column 20, line 60 and data sheet D6) and HL-2081 (see document D5, Example 3, column 22, line 17 and data sheet D7), which have softening points of 89 and 130 °C, respectively. However, none of these examples discloses a pellet weight (feature 1.3) and details of the film forming material (feature 1.10 and 1.11).

A melting point of the film forming material (pelletising aid, feature 1.10) is disclosed in document D5, column 7, lines 46 to 50. As this passage, referring to the hot melt pressure sensitive adhesive, does not define the material of the pelletising aid, which is not necessarily a thermoplastic material (see e.g. document D5, column 6, line 60 and column 12, line 48), feature 1.10 is not disclosed in combination with a film forming material comprising a thermoplastic polymer. The "*solid thermoplastic materials*" (see document D5, column 7, lines 42 to 46) refer to the hot melt adhesive compositions and not to the hot melt pressure sensitive compositions. This teaching cannot be directly transferred to hot melt pressure sensitive adhesives since hot melt adhesives are solid at room temperature and their packaging is unproblematic (see document D5, column 1, lines 27 and 36).

According to document D5, the film forming material (pelletising aid) may be a thermoplastic, a tackifying resin and mixtures of these (see document D5, column 4, lines 8 to 10). The pelletising aid may be a wax or further comprise wax in concentrations of less than 10 wt-%, less than 5 wt-%, most preferably ranging from

about 0.1 wt-% to 3 wt-% (see document D5, column 6, lines 60 to 67). Wax in an amount of "up to 15 wt-%" (feature 1.11) is not disclosed in combination with Examples 1 to 3.

7.3 The board observes that the appellant's general allegation that the pellet weight lies inevitably in the claimed range of less than 5 g due to the usual size, shape and density is not sufficient for proving a direct and unambiguous disclosure.

7.4 Apart from this, the approach taken by the appellant is an exercise in cherry-picking within the disclosure of document D5 which creates a combination of features not directly and unambiguously disclosed in document D5, for instance, by considering the pellet weight, which is only disclosed in Example 2; the softening point of the adhesive material, which is only disclosed in Examples 1 and 3; the melting point of the film forming material, which is not disclosed in combination with a thermoplastic film forming material; and the wax content of the film forming material, which is not disclosed for Examples 1 to 3.

7.5 Conclusion on novelty

In view of the above, the board considers the subject-matter of claim 1 of auxiliary request 1 to be novel over document D5 (Article 54(1) and (2) EPC).

8. Auxiliary request 1 - inventive step

8.1 It was not disputed that document D9 is a suitable starting point for assessing inventive step of the subject-matter of claim 1 of auxiliary request 1.

8.2 The subject-matter of claim 1 of auxiliary request 1 differs from the hot melt pressure sensitive adhesive of document D9 in feature 1.3 (pellet weight), the first part of feature 1.7 (the softening point of 80 to 150 °C of the adhesive material) and feature 1.11 ("the film forming material of the shell comprises wax, in an amount of up to 15 wt-% wax"). According to the board's interpretation of feature 1.11, a wax content of 0 wt-% is excluded (see point 1.2 above). The board also notes that the claimed wax content of feature 1.11 is related to the effect set out in feature 1.14.

8.3 While the ranges for the pellet weight of less than 5 g each and the softening point of 80 to 150 °C of the adhesive material appear to be in the usual range for hot melt pressure sensitive adhesives and generally known in the art, the core issue is whether document D9 taught away from using wax for the film forming material.

8.4 The parties formulated the objective technical problem as the provision of alternative coated pellets.

8.5 Non-obviousness in view of document D9 and the common general knowledge

The proposed solution is not obvious with regard to document D9 alone or in combination with the common general knowledge, especially since document D9 discourages the use of wax. While wax is a conventional additive in adhesives and film forming materials, document D9 does not disclose the use of wax in adhesives and/or film forming materials. The summary of the invention in document D9 teaches that "*[t]he invention is particularly useful for low viscosity thermoplastic compositions*" (see document D9, column 2,

lines 33 to 39). In this context, document D9 discloses that "*the film material is selected such that it is similar to the complex viscosity of thermoplastic composition being packaged*" (see document D9, column 2, lines 45 to 51). It concludes that "*[t]hus, the film is generally not comprised of a wax-like material having a molecular weight of less than about 40,0000 or other materials that generally rise steeply in viscosity at lower temperatures*" (see document D9, column 2, lines 59 to 63). In view of this, document D9 does not give any incentive to add wax, in an amount of up to 15 wt-% in order to provide a non-blocking pellets surface.

8.6 Non-obviousness in view of documents D9 and D5

Document D5 is concerned with hot melt pressure sensitive adhesives in the form of pellets that are non-blocking and can be easily processed (see document D5, column 1, lines 43 to 55). However, the pellets of document D5 are not manufactured by co-extrusion.

Starting from document D9, the person skilled in the art would have had no incentive to change the film forming material by adding wax, in an amount of up to 15 wt-% wax (see document D5, column 6, lines 63 to 67), especially as document D9 teaches the contrary (see document D9, column 2, lines 59 to 63). Although document D5 mentions the use of wax for the film forming material, its use is optional (see document D5, column 6, lines 60 to 67). Therefore, if the person skilled in the art, starting from document D9, had considered document D5, they would have chosen the embodiment without wax.

8.7 Non-obviousness in view of documents D9 and D10

The board observes that even if the person skilled in the art had considered a combination of the teachings of documents D9 and D10, this would not have rendered obvious the subject-matter of claim 1 since none of these documents discloses feature 1.11.

8.8 Since the board considers that it is not obvious to modify the hot melt pressure sensitive adhesive known from document D9 to arrive at feature 1.11, the question of whether the features 1.3 and 1.7 are obvious may be left open.

8.9 Conclusion on inventive step

In view of the foregoing, the subject-matter of claim 1 according to auxiliary request 1 is based on an inventive step when starting from document D9 (Article 56 EPC).

9. Overall conclusion

The claims of auxiliary request 1 are allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent on the basis of the claims 1 to 10 of auxiliary request 1, filed as auxiliary request V with the reply to the statement of grounds of appeal, and a description to be adapted thereto.

The Registrar: The Chairman:

N. Schneider P. Lanz

Decision electronically authenticated