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**Datasheet for the decision
of 23 March 2026**

Case Number: T 0276/24 - 3.2.01

Application Number: 20712501.4

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A24B15/38, D04H1/425, D04H1/58

Language of the proceedings: EN

Title of invention:

A PACKAGING MATERIAL AND AN ORAL POUCHED NICOTINE PRODUCT

Patent Proprietor:

Swedish Match North Europe AB

Opponents:

Nonwovenn Ltd
British-American Tobacco (Investments) Limited
Philip Morris Products S.A.
TENOWO GmbH

Headword:

Relevant legal provisions:

EPC Art. 83, 54, 56

Keyword:

Sufficiency of disclosure - (yes)

Novelty - (yes)

Inventive step - (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

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Case Number: T 0276/24 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 23 March 2026

Appellant: (Opponent 2)	British-American Tobacco (Investments) Limited Globe House, 1 Water Street London WC2R 3LA (GB)
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted/
electronically transmitted on 18 December 2023
concerning maintenance of the European Patent
No. 3784064 in amended form.

Composition of the Board:

Chairman G. Pricolo
Members: S. Mangin
P. Guntz

Summary of Facts and Submissions

- I. The appeal was filed by the appellant (opponent 2) against the interlocutory decision of the opposition division finding that, on the basis of the main request, the patent in suit (hereinafter "the patent") met the requirements of the EPC.
- II. In particular, the opposition division held that:
- the patent, on the basis of this request, disclosed the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art,
 - the subject-matter of this request was novel over D6 (WO 2020/169514 A1) and D9 (US 2014/0242309 A1) and involved an inventive step starting from D1 (EP 3192380 A1), D2 (WO 2016/040754 A1), D7 (WO 2016/083463 A1), D26 (EP 2692254 A1).
- III. Oral proceedings were held before the Board on 23 March 2026.
- IV. The appellant (opponent 2) requested that the decision under appeal be set aside and that the European patent No 3784064 be revoked.
- The respondent (patent proprietor) requested that the appeal be dismissed or, in the alternative, that the patent be maintained in amended form according to one of auxiliary requests 1 to 25, filed with the reply to the statement of grounds of appeal.
- V. Independent claim 1 of the main request reads as follows:

- 1.1 A packaging material for use in an oral pouched nicotine product in order to enclose a filling material,
- 1.2 said filling material comprising a particulate non-tobacco material and a nicotine source,
- 1.3 said packaging material being a saliva-permeable nonwoven material comprising
- 1.4 carded fibres,
- 1.5 - 50%-100% of said carded fibres being cellulose based staple fibres, and
- 1.6 - 0%-50% of said carded fibres being thermoplastic fibres, with % numbers being based on total weight of carded fibres at 21°C and 50% RH,
- 1.7 - said packaging material further comprising a binder,
- 1.8 said binder constituting 20%-60% of a total weight of said packaging material,
- 1.9 said cellulose-based staple fibres having a linear density ≤ 1.3 decitex, and
- 1.10 said packaging material having a basis weight above 30 g/m.

VI. The present decision further refers to the following documents:

- D3: WO2017/093488 A1
- D8: US 2018/0153211 A1
- D10: EP 0649796 A1
- D11: US 2016/0157515 A1
- D28: US 2016/0000140 A1
- D29: US 2011/0193250 A1
- D30: DE 10 2008 038 556 A1

and three following prior uses:

- "Siberia", set out in documents D31-D36
- "Wow! Sunny Honey", set out in documents D36-D41, and
- "Oden's", set out in documents D36, D41-D43

Reasons for the Decision

1. Main request - Sufficiency of disclosure

The invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

1.1 At the oral proceedings the parties referred to their written submissions.

The appellant (opponent 2) submitted that the patent did not meet the requirements of Article 83 EPC.

1.1.1 The first line of argument concerned the absence of any disclosure in the patent of a method for measuring the linear density of the cellulose-based staple fibres, which was a key parameter of the claims. The appellant submitted that, in practice, it was not feasible to measure the linear density of fibres once they had been incorporated into a nonwoven web, particularly as staple fibres were short (typically 30-80 mm), whereas the unit of linear density (decitex) referred to grams per 10,000 metres. The skilled person would therefore have had to rely on the target values provided by fibre manufacturers, which were subject to significant tolerances (often $\pm 10\%$ or more). As a result, the skilled person could not consistently determine whether a given material fell within the claimed range, and the patent provided no guidance on how to resolve this issue.

1.1.2 A further objection was raised in relation to the definitions of the components in claim 1, specifically the ranges for cellulose-based staple fibres,

thermoplastic fibres, and binders. The appellant argued that the claim allowed for arbitrary classification of ingredients, since thermoplastic fibres could also function as binders. This led to ambiguity as to whether a given composition fell within the claim, depending on how the components were classified. The skilled person was therefore unable to determine with certainty whether they were working within the scope of the claim, which, according to the appellant, amounted to a lack of sufficient disclosure.

1.1.3 The appellant also contended that the patent failed to provide sufficient guidance for the skilled person to perform the invention across the whole scope of the claims. The claims were broad, covering a wide range of compositions and basis weights, but the patent did not indicate which combinations of parameters would result in a packaging material that was suitable for use in an oral pouched nicotine product. In particular, there was no guidance as to what basis weight would be too high, such that the material would become saliva-impermeable and thus unsuitable for the claimed use. The appellant submitted that the skilled person would have been required to undertake a research programme to determine which combinations of linear density, binder content, basis weight, and fibre types were suitable, which constituted an undue burden.

1.1.4 Furthermore, the appellant argued that the patent did not provide evidence or guidance that the invention could be performed across the entire claimed range, especially for extreme values such as very high basis weights. If, as the respondent had argued, certain prior art materials were not suitable for the claimed use, the patent did not teach the skilled person how to achieve suitability across the full scope of the claim.

The appellant concluded that, for these reasons, the requirements of Article 83 EPC were not fulfilled.

- 1.2 The Board is not convinced by the arguments of the appellant (opponent) and confirms the preliminary opinion stated in the communication under Article 15(1) RPBA.
- 1.2.1 Decitex (Grams per 10,000 metres of yarn) is the unit for fibre linear density. It is a well established standard parameter for measuring the fineness of fibres and filaments in nonwoven materials, such that no measuring method is required to be in the patent for the skilled person to measure the linear density of the staple fibres. The Board notes that the linear density of small staple fibres can also be measured as reflected in the prior art cited. The Board further notes that a range is claimed (*"said cellulose-based staple fibres having a linear density ≤ 1.3 decitex"*) and not a specific value.
- 1.2.2 Furthermore, as mentioned by the respondent (patent proprietor), the packaging material of claim 1 comprises carded fibres and further comprises a binder. The carded fibres comprise cellulose-based staple fibres, and optionally, thermoplastic fibres. By using the wording "further comprising a binder", the "binder" is to be present in addition to any fibre component present in the carded fibre mixture. Hence, any binding component present in the nonwoven material in the form of bicomponent staple fibres does not contribute to the 20-60 wt. % binder.
- 1.2.3 The patent provides examples in paragraphs [0086]-[0088] and [0101] guiding the skilled person on how to carry out the invention. The Board notes that no

evidence has been submitted by the appellant (opponent) that the skilled person cannot carry out the invention over the scope of claim 1 with the information provided in the patent.

- 1.2.4 As to the packaging material having a basis weight above 30 g/m², the skilled person would disregard high basis weight that would not provide sufficient porosity. In any event upper limits of the basis weight are given in paragraph [0055] of the patent.

2. Main request - Novelty over D6 and D9

The subject-matter of claim 1 is novel over D6 and D9.

- 2.1 At the oral proceedings the parties referred to their written submissions.

- 2.1.1 In particular, the appellant argued that the subject matter of claim 1 of the main request lacked novelty over D6.

D6 disclosed a packaging material for use in oral pouched products, including non-tobacco compositions, which comprised carded fibres, cellulose-based staple fibres, and thermoplastic fibres. The appellant pointed out that D6 described a combination of fibres in amounts that overlapped with those claimed: 0-95% cellulose-based staple fibres and 5-100% thermoplastic fibres (page 6, lines 26-32). D6 further disclosed that the thermoplastic fibres included a first and a second component, with the second component (e.g., PE in a PP/PE bicomponent fibre) acting as a binder by melting or softening to bind the fibres together (page 7, lines 16-17). The amount of the second component (binder) could be from 2.25% to 55% by weight of the whole material, overlapping with the claimed 20-60% range.

The appellant specifically referred to the example in the seventh row of the table bridging pages 18 and 19 of D6, which included 70% PP/PE and 30% Tencel (a cellulose-based fibre). The basis weight of this sample was 32 g/m², within the claimed range of "above 30 g/m²." The linear density of the cellulose-based fibres was disclosed as ≤0.9 dtex (page 11, lines 24-25), also within the claimed limit of 1.3 dtex. The appellant argued that the PE component functioned as a binder, and the amounts of Tencel and PP fibres, when calculated based on the total weight of fibres, overlapped with the claimed ranges. The appellant further submitted that the term "binder" in claim 1 should be interpreted broadly to include thermoplastic fibres functioning as binders, and that the claim did not require the binder to be distinct from the carded fibres. The skilled person would not consider that the term "binder" in claim 1 must only refer to a binder for chemical bonding. Thus, all features of claim 1 were disclosed in D6.

- 2.1.2 Furthermore, the appellant argued that claim 1 lacked novelty over D9. D9 described a nonwoven web comprising PLA fibres blended with synthetic cellulosic fibres (such as Tencel), with the web being suitable for use in tobacco pouches and herbal sachets. D9 disclosed blends of low-melt coPLA with PLA, where the coPLA acted as a thermally active binder. The ratios of PLA to coPLA could be 80:20 to 20:80, and the amount of binder (coPLA) could be from 8% to 76% by weight, overlapping with the claimed range of 20-60% binder. D9 also disclosed that 5-60% synthetic cellulosic fibres could be blended with the PLA, and the linear density of the web fibres could be 1.2 denier (corresponding to 1.33 dtex), within the claimed limit. Moreover, the

basis weight was disclosed as 8-50 g/m² (claim 24 of D9), overlapping with the claimed range.

The appellant maintained that the PLA and coPLA fibres in D9 fulfilled the functional requirements of the claimed binder and thermoplastic fibres, and that the web was suitable for use in oral pouched nicotine products. The appellant also argued that the features of claim 1 were disclosed in the same embodiment in D9, and that the skilled person would understand the "web fibres" to include both PLA and cellulose fibres. Therefore, all features of claim 1 were disclosed in D9, and the claim lacked novelty.

Finally, claim 1 was directed to a packaging material that must merely be suitable for use in an oral pouched nicotine product in order to enclose a filling material that comprises a particulate non-tobacco material. D9 disclosed that the web was used for tobacco pouches. It thus was inherent that the web was suitable for use in an oral pouched nicotine product.

2.2 The Board confirms the preliminary opinion expressed in the communication pursuant to Article 15(1) RPBA.

2.2.1 In D6, no binder is present in addition to the cellulose fibres and the bicomponent thermoplastic fibres.

As mentioned by the respondent (patent proprietor), D6 specifically states that "there is no need to have an additional binder in the packaging material" (page 7, lines 26-30) and that it is believed that the packaging may be experienced softer and less slippery in the mouth as a result of "the absence of a binder" (page 8, lines 30-35 and page 9, lines 12-16).

While the low melting temperature component of the thermoplastic fibre may melt and have a binding effect, this part of the bicomponent thermoplastic fibre cannot be considered as the binder defined in claim 1, as it has to come in addition to the staple fibres.

The Board notes that this interpretation of claim 1 is supported by paragraphs [0087] and [0088] of the patent, where the percentages of the viscose fibres and the polypropylene fibres are calculated taking into account the amount of binder.

Furthermore, paragraph [0007] of the patent discloses the different types of bonding and reads: "In chemical bonding a binder, also called a bonding agent or an adhesive, is combined with the fibres. This type of nonwoven is generally called chemically bonded or adhesive bonded nonwoven". This sentence confirms that the binder is in addition to the fibres constituting the nonwoven material and paragraph [0050] of the patent discloses possible binders.

- 2.2.2 Similar considerations apply for D9. The Board notes that the 20-40% of binder in claim 1 comes in addition to the staple fibres. Considering in D9 the sheath component of coPLA bicomponent fibres as constituting the binder is not consistent with the wording of claim 1 nor the description of the patent which must be consulted for claim interpretation. For the same reasons as set out above regarding the assessment of novelty over D6, the Board finds that D9 fails to disclose features 1.7 and 1.8 : *"said packaging material further comprising a binder, said binder constituting 20%-60% of a total weight of said packaging material"*.

3. Inventive step

The subject-matter of claim 1 involves an inventive step when starting from D7, D2, D26, D1 and the prior uses "Siberia", "Wow! Sunny Honey" and "Oden's".

3.1 Inventive step starting from D7

3.1.1 The appellant submitted that D7 may be regarded as the closest prior art and that the only difference between D7 and claim 1 was the requirement that the linear density of the cellulose-based staple fibres had a linear density less than 1.3 dtex.

(a) In particular example 3 of D7 included all features of claim 1 (see page 12, line 32 to page 13, line 2 and Table 1), with the exception of a linear density of 1.3 dtex or less. It was also disclosed on page 7, lines 17 to 20 and on page 8, lines 28 to 31 of D7 that the packaging materials disclosed therein were suitable for use in oral pouched nicotine products containing nicotine and a non-tobacco particulate material.

(b) The appellant argued that no technical effect had been shown that could be attributed to the reduction of linear density to 1.3 dtex or lower. Therefore, the objective technical problem was the provision of an alternative packaging material for use in an oral pouched nicotine product.

The only sample containing fibres having a linear density of more than 1.3 dtex was the Reference Sample described in paragraph [0084] of the patent. The packaging material had 100% of the fibres having a linear density of 1.7 decitex, further comprised 40 wt% binder and had a basis weight of

29 g/m². This sample was not suitable for deducing the effect of the lower density of the viscose fibres as other parameters varied from the examples of the invention disclosed in the patent.

The patent provided no direct comparison between the sample labelled "0% PP" and the Reference sample. As such, there was no direct comparison that showed that any effect was attributable to linear density alone.

The appellant further argued that even if it could be considered that the reference sample and the sample with 0% PP may be compared, no technical effect had been shown to be attributed solely to the linear density of the viscose fibres. In particular there was no evidence that the linear density impacted the leakage, seal strength or the permeability.

The appellant noted that as the problem to be solved was the provision of an alternative and that the use of cellulose fibres having a linear density of less than 1.3 dtex was known to the skilled person. Therefore, no inventive step could be acknowledged.

Furthermore, the claimed solution was also obvious in light of D7 when combined with any of D1, D9 or D26. Each of D1, D9 and D26 disclosed a packaging material having a linear density as claimed and would thus provide the skilled person with motivation to reduce the linear density to below 1.3 dtex with a reasonable expectation of success in providing an alternative.

- (c) The appellant noted that the opposition division considered that D7 taught the skilled person away from using cellulose fibres having a low linear density. However, it was established case law that it could not be inventive to take a known product from the prior art and simply make it worse in the known way by adding a disadvantageous feature back into the prior art product. D7 explicitly taught that the reason the linear density should be increased relative to the standard linear density was because a decrease in linear density led to a reduction in porosity.
- In this regard, it was taught on page 10, lines 1 to 10 of D7 that a higher linear density provided a more open nonwoven with higher porosity than a standard viscose fleece material, and that such fleece material had been found to be more permeable. It was thus also implicitly disclosed that a lower linear density resulted in a less permeable fleece. The results in Table 2 corroborated this. Table 2 and the conclusion on page 16 showed that the permeability of Example 1 was greater than that of the reference and standard examples. The only significant difference between the reference and standard samples with that of Example 1 was that the linear density of the fibres used in Example 1 was greater (3.1 dtex) than that of the reference/standard example (1.7 dtex). Example 1 of D7 thus showed that permeability decreased as linear density decreases.
- In the context of D7, such reduction in permeability was implied to be a disadvantage. However, it was established case law that disadvantageous modifications did not involve an inventive step if the skilled person could clearly predict these disadvantages and if these

predictable disadvantages were not compensated by any unexpected technical advantage. Here, all that had been done was to modify D7 in a way that the skilled person could clearly predict the disadvantages.

Therefore, D7 did not teach the skilled person away from decreasing the linear density when looking to provide an alternative product.

- (d) Furthermore, the appellant argued that when looking to solve the problem of providing an alternative, the skilled person would learn from D26 that fibres having linear densities of 0.9 dtex were suitable for use in pouch materials for enclosing non-tobacco material. The skilled person would therefore be motivated to modify the products to decrease the linear density as part of routine optimisation. The skilled person would not consider that D26 would teach the skilled person to remove or reduce the amount of binder in Example 3 of D7; there was simply no teaching in D26 to suggest that this would be necessary or that the presence of a binder was incompatible with the hydroentangled fleece material.

Additionally, there was no incompatibility between D7 and D26 with regard to aperture sizes. Both D7 and D26 described having a fast release rate of nicotine and flavours (e.g., page 10, lines 1 to 10 of D7 and paragraph [0033] of D26). The fact that D7 referenced D26 (D44) was also a pointer to the fact that the skilled person would turn to the teachings in D26 when starting from D7 without requiring hindsight.

- (e) There was also no teaching away from combining D7 with the teachings in either D1 or D9. D1 was

directed towards the same purpose as D7 of providing a more rapid and stronger taste experience (e.g., [0063] of D1) and of providing a pouch having good seal strength ([0054] of D1). There was no incompatibility between D7 and D1. Additionally, D7 and D9 were both related to the same technical field of nonwoven packaging materials for use in tobacco products.

(f) Finally, the mere fact that D7 disclosed that linear densities may typically be within 1.7 to 2 dtex did not teach the skilled person away from using other linear densities when simply looking to provide an alternative.

3.1.2 The Board is not convinced by the arguments of the appellant.

3.1.3 The Board agrees with the appellant that the only difference between the subject-matter of claim 1 and D7 is that the cellulose-based staple fibres have a linear density less than 1,3 decitex.

However, the Board does not agree with the appellant that linear density does not impact the permeability and the leakage. Indeed, the finer the fibres are, the smaller the pore sizes, thereby decreasing the permeability of the nonwoven web and reducing leakage. This is stated in paragraph [0090] of the patent:

"Of the three packaging materials according to the invention shown in the photos, the third material seen in Figure 3 has the largest pores, which coincides with that it has the lowest percentage of the 0.9 denier viscose fibres and thus the highest percentage of the 1.7 denier PP fibres".

This is corroborated by paragraphs [0095] and [0096]. As mentioned by the respondent, the fact that the coarser fibres are of different nature (PP) does not impact the fact that the finer the fibres, the smaller the pores of the nonwoven web. As can be seen in paragraphs [0093]-[0094] and [0097]-[0098] of the patent the low linear density of the fibres also has an impact on the air permeability and the leakage of the nonwoven web.

D7, page 10, lines 1-10 confirms the above effects:
"It has been found that said fleece material comprising staple fibres of viscose, wherein at least 25% by weight, such as 25-100% by weight or 50-100% by weight or 75- 100% by weight, of the staple fibres of viscose have a linear mass density within the range of from 2.5 to 5 decitex, in particular within the range of from 3 to 5 decitex, and more particularly within the range of from 3 to 4 decitex, provides a more open nonwoven with higher porosity than a standard viscose fleece material normally used in oral pouched smokeless tobacco products. Said fleece material of the oral pouched product according to the invention has been found to be more permeable than a standard viscose fleece material and to provide a more rapid initial release of flavours and thereby a more immediate taste experience, stronger taste and a more transparent material".
As mentioned by the appellant, D7 implicitly discloses that a lower linear density results in a less permeable fleece.

However, even if it considered that the problem to be solved is the provision of an alternative, starting from D7, the skilled person would not arrive at the subject-matter of claim 1 without inventive skills.

D7 discloses at the top of page 2 that:

"Today's commercial pouch paper is typically made up of viscose staple fibres having a linear mass density (fibre fineness) of about 1.7 to 2 decitex and having an essentially round (spherical) fibre cross-section".

Starting from this observation, the invention in D7 is to use coarser fibres to increase the permeability of the nonwoven fabric. Reference is made in particular to the first paragraph of page 10 of D7.

Therefore, starting from D7, the skilled person would not take a measure (decreasing the linear density of the viscose fibres) which goes in the opposite direction of what the invention of D7 is about.

However, even if he would, as argued by the appellant, the skilled person would not go below the linear density of the commercially available viscose staple fibres disclosed on page 2 of D7.

The example 3 of D7, taken as starting point, discloses the use of 50% of the viscose fibres having a round cross-section of 1.7 decitex and 50% of the viscose fibres of a trilobal cross-section of 3.3 dtex.

The skilled person would at most decrease the linear density to 1.7-2 dtex. However, based on D7 alone, there is no incentive to go below these linear densities.

Furthermore, the skilled person combining the teaching of D7 with D26, D1 or D9 would not arrive at the subject matter of claim 1. There is no reason for the skilled person to only lower the linear density of the viscose staple fibres based on the teaching of D26, D1 or D9 without taking into account the complete teaching of these documents that is the apertures in D26, the

lower basis weight of the nonwoven web in D1, the absence of further binder in D9.

As mentioned by the respondent, due to the deliberately made apertures in the nonwoven web of D26, the skilled person combining D7 with D26 would arrive at a nonwoven web which is not suitable to enclose filling material comprising a particulate non-tobacco material and a nicotine source. Indeed, according to paragraph [0041] of the patent, such particles may have an average particle size within the range of 50-500 μm , which is smaller than the largest aperture size of the apertured fleece sample in the table presented in paragraph [0052] of D26.

D1 teaches a basis weight of the nonwoven web of at most 25 g/m^2 , which is contrary to feature 1.10 of claim 1, i.e. above 30 g/m^2 .

Paragraph [0009] of D9 discloses that it is desirable that the substrate media be 100% bio-degradable and not contain any inert or non-biodegradable components. The skilled person would therefore not just lower the linear density of the viscose fibres but would remove the binder.

3.2 Inventive step starting from D2

3.2.1 The appellant argued that the subject matter of claim 1 did not involve an inventive step starting from D2.

- (a) The appellant was of the opinion that the subject-matter of claim 1 differed from D2 (embodiments 1, 3, 4, 9, 16 and 19 on pages 6 to 8 of D2, page 3, lines 16-17, page 4, lines 21-22, page 11, lines 26-30, page 21, lines 12-17 and page 19, lines 8 to

15 and example 2 on page 27) in that the cellulose-based fibres had a linear density no greater than 1.3 dtex.

In their view there was no technical effect associated with the reduction of cellulose based fibres linear density. The reduction of leakage, the increase of seal strength and the reduced permeability had not been shown.

Therefore, according to the appellant, the objective technical problem may be regarded as the provision of an alternative packaging material for use in an oral pouched nicotine product.

The appellant argued that cellulose-based fibres having a linear density of less than 1.3 dtex were known to the skilled person and was an arbitrary selection among equally obvious alternatives devoid of any inventive step.

No teaching away was present in D2. In fact, it was disclosed on page 19, lines 8 to 11 that the physical parameters of the fibres could vary and in particular that the fibres could have varying size (e.g. denier per filament). Therefore, D2 made it clear that the linear density was not regarded as being limited to certain embodiments but could be varied by the skilled person. Moreover, it was not the case that D2 taught certain linear densities, e.g. of 1.5 to 2 dpf, as being "preferred". Rather, the wording of D2 at lines 12 to 13 of page 19 was: *"In certain embodiments, fibres ... can measure about 1.5 dpf to about 2.0 dpf, or about 1.6 dpf to about 1.90 dpf"*.

The claimed solution was also obvious in light of any of the following disclosures:

- D26, paragraph [0047], taught an embodiment in which the fleece material included fibres having a linear density of 0.9 dtex.
- D9, claim 20, disclosed web fibres having a linear density of 0.6 to 6 denier, the lower limit representing a linear density of 0.67 decitex. Moreover claim 23 of D9 disclosed web fibres having a linear density of 1.2 denier, which corresponded to a linear density of 1.33 decitex.
- D1, paragraph [0047], relating to packaging materials suitable for oral pouched nicotine products and thus which belonged to the same technical field as D2, taught that the linear density of the fibres may be from 1 to 2.2 dtex.

The skilled person would be motivated to modify the material of D2 by reducing the linear density based on the teachings in any of D1, D9 or D26 especially in light of the pointer in D2 that the linear density could be varied.

- (b) The appellant further argued that if the technical effect was considered to be the reduction in leakage or permeability, then such effect was well-known in the art and wholly expected before the priority date. A lower linear density (i.e. of the same material) corresponded to a finer fibre (i.e. smaller width/diameter) that had a lower mass per unit length. The skilled person thus would have understood before March 2019 that, for any given total weight, a packaging material having finer fibres would have a lower porosity since there would be a greater number of fibres present per unit area for the same basis weight. If such effect

was acknowledged in the present instance, the claimed solution would be entirely obvious since the effect of linear density on porosity was common general knowledge at the priority date.

D7 further disclosed, for example, on page 10, lines 1 to 10 that a higher dtex provided a more open structure with higher porosity, and thus implicitly that a lower dtex provided a more closed structure with lower porosity.

It was acknowledged in paragraph [0068] of the patent that air permeability was associated with porosity, and thus also with leakage. As such, these effects would be entirely expected by the skilled person and thus the skilled person would be motivated to modify the linear density with a reasonable expectation of success in reducing permeability and thus leakage.

- (c) In the event that the feature of 20-60 wt% binder in claim 1 constituted a second difference with respect to D2, the appellant submitted that no technical effect had been shown that could be attributed to the presence of 20-60 wt% binder. With regard to the binder, all of the examples (including the reference sample) include 40 wt% binder. There were no examples without a binder, nor any examples including a binder at an inclusion level outside of the range of 20-60%. Therefore, no comparison had been provided and thus there was no evidence on file that there was any technical effect associated with the inclusion of 20-60 wt% binder.

The two differences regarding the binder (i) and the linear density of the cellulose-based staple

fibres (ii) could be assessed using partial problems. In this instance, there was no synergistic effect apparent for said features, and indeed no individual effect even apparent for said features. Since there was no comparative data for either feature, it could not be concluded that there was any synergistic effect between different features.

The objective technical problem associated with feature (ii) of linear density was as detailed above, the solution to which was obvious.

The objective technical problem associated with feature (i) of 20-60 wt% binder was the provision of an alternative packaging material for use in oral pouched nicotine products.

The solution to this technical problem was also obvious in view of the skilled person's common general knowledge. Indeed, the inclusion of such amounts of binder was entirely conventional in the field of nonwoven packaging materials. As evidence of this, it was disclosed in paragraph [0084] of the patent itself that a reference material, which was commercially available and "commonly used", included 40 wt% of a binder. It was further stated in paragraph [0050] of the patent that binders were "commonly used" in packaging materials for oral pouched snus products. The obviousness of including a binder was further acknowledged in the background of the patent itself; in paragraph [0007], which acknowledged that chemical bonding may typically be used to bond together fibres in a web using a binder.

For completeness, the appellant noted that the solution of including 20-60 wt% binder was further obvious in view of numerous prior art documents and in view of packaging materials that were commonly

used in commercial packaging materials; for example:

- D1 - paragraph [0045] disclosed that the nonwoven may include 35-45% binder; Examples 1A and 1B of D1 also include 35% binder ([0125]).
- D3 - page 12, lines 13-15 disclosed that the nonwoven may include 35-45% binder, and the examples in D3 each include 35-45% binder (see page 30, lines 15 to 18).
- D7 - page 13, lines 1-2 disclosed that the examples all include 35-45% binder.
- D8 - paragraph [0202] disclosed that the reference material included 35-45% binder, and that this reference was a commercially available material.
- D10 - page 3, lines 18-20 and table on page 6, lines 37 to 48, showed a total amount of 39.22% binder.
- D30 - paragraph [0006] disclosed that prior art nonwoven webs usually had binder content of 20-70%.

The amount of binder claimed was entirely common place and would be included by the skilled person as part of routine optimisation and without requiring any inventive skill.

Therefore, claim 1 lacked inventive step over D2 in combination with common general knowledge, or in combination with any of D1, D3, D7, D8, D9, D10, D26 or D30 even where the presence of a binder was considered to be a distinguishing feature.

- (d) Finally, the basis weight above 30 gsm could not be regarded as a distinguishing feature. In example 2 of D2 the basis weight of the nonwoven web is 30 g/m². According to established case law, the claim

cannot distinguish "above 30 g/m²" from a disclosure of 30 g/m² in the prior art.

In the event that the feature of "packaging material having a basis weight above 30 g/m²" (iii) in claim 1 constituted a difference with respect to D2, the appellant argued that there were no data in the patent showing any effect that could be attributed to the requirement that the basis weight was above 30 g/m².

As a first point, it was not credible that any technical effect was achieved across the scope of the claims.

The Reference sample in the patent was said to have a basis weight of 29 g/m². The remaining samples had a basis weight of 38 g/m², which was significantly higher than that of the Reference sample. Even at such high basis weights, no effect was shown. Therefore, it was not credible that any effect would be achieved at the lower end of the range claimed; i.e. where the basis weight was increased by only 1 g/m² compared with the Reference sample (30 g/m² compared with 29 g/m²). This was especially the case for example 2 in D2 with a basis weight of 30 g/m². There was no data in the patent that rendered it credible that any effect was achieved when the basis weight was increased to just above 30 g/m² as compared with a basis weight of 30 g/m² (± 0.5 g/m² according to standard rounding convention, and not accounting for error margins).

Therefore, no technical effect could be attributed to the basis weight.

For the same reasons as noted above, the feature of basis weight could be considered as a separate

partial problem. Indeed, there was no evidence on file to show any synergistic effect between the basis weight and the linear density that would be anything more than a mere aggregation of known effects.

The objective technical problem associated with feature (iii) was again the provision of an alternative packaging material, the solution to which was obvious in view of D2 alone or in light of any of D7, D9, D28 or D29.

D2 itself taught on page 21, lines 16-17 that the webs could have basis weight of 20-35 g/m².

Therefore, D2 pointed the skilled person towards webs that had a basis weight of above 30 g/m² and up to 35 g/m² as an alternative to a basis weight of 30 g/m². When looking to provide an alternative, the skilled person would thus be motivated to modify the basis weight of example 2 to increase the basis weight to, e.g., 35 g/m² without requiring inventive skill. Reference could also equally be made to any of D7, D9, D11, D28 and D29. In particular:

- D7 taught, not only binder content, but also a basis weight above 30 g/m² (page 10, lines 11-13, and example 3 having a basis weight of 33 g/m² as shown in Table 2)
- D9 - claim 24 disclosed a basis weight of 8-50 g/m², which substantially overlapped with the claimed range. Reference was also made to paragraphs [0006], [0050] and table 1 of D9.
- D28 - paragraph [0058] disclosed a range of basis weight of 10-40 g/m² for fibrous webs.
- D11 - paragraph [0107] disclosed that fibrous webs could have varying porosities, such as a basis weight of 20-35 g/m².

- D29 - paragraphs [0066] and [0067] disclosed that a basis weight may be in the range of from 8 to 40 g/m².

Therefore, the feature of the basis weight was obvious in light of D2 alone or in combination with any of D7, D9, D11, D28 or D29.

3.2.2 The Board is of the opinion that the subject matter of claim 1 differs from example 2 of D2 in that:

- (i) the material further comprises 20-60 wt% binder;
- (ii) the cellulose-based staple fibres have a linear density ≤ 1.3 dtex; and
- (iii) the basis weight of the packaging material is greater than 30 g/m².

In D2, no binder in addition to the staple fibres is present in the nonwoven web. The PLA component in the PLA:Viscose bicomponent fibres cannot be considered as the binder to be further added to the carded fibres, as it is a component of the fibre itself.

Furthermore, the nonwoven web of example 2 has a basis weight of 30 g/m² and not greater than 30 g/m² as required by claim 1. The basis weight of the nonwoven web in example 2 of 30 g/m² is outside the claimed range. When defining a range above a certain value, the end value is not encompassed. In D2 the basis weight expressed with the same accuracy as the range defined in claim 1 is outside the claimed range.

The Board agrees with the opposition division and the respondent that using the partial problem approach, and thus defining for each of the differences a partial problem, is not appropriate. The three above features interact together to define a specific nonwoven. The Board does not share the appellant's view that the

claimed subject-matter consists in a mere aggregation of separate features having no effects or separate effects. Rather to the contrary, features (i), (ii) and (iii) of the subject-matter of claim 1 work together to result in nonwoven web having a specific porosity directly impacting the permeability and the leakage and a specific seal strength.

Indeed, the nonwoven web with a specific amount of binder, a defined linear density of the cellulose-based staple fibres and basis weight impact together the porosity and the seal strength of the nonwoven web.

The Board agrees with the definition of the problem to be solved by the opposition division and the respondent. Starting from D2, the problem to be solved may be defined as providing an improved packaging material (e.g. in terms of leakage and seal strength).

The Board notes that the approach proposed by the appellant (opponent) is based on an ex-post facto analysis. Indeed, cherry picking the missing features in the cited documents without taking the entire information provided in the documents to arrive at the subject matter of claim 1 is based on hindsight.

Moreover, the skilled person would not add binder in the nonwoven material of D2 as required by claim 1 to increase the seal strength because the aim of D2 is to reduce or eliminate the use of binder. Reference is made to D2, page 2, lines 31- page 3, line 5:

"To manufacture pouched products of the type noted above, the pouches must be sealed after being filled with the desired material. As noted in US Pat. Pub. No. 2014/0026912 to Rushforth et al., such sealing is typically accomplished by application of a binder

material to the fiber network, which enables the pouch to be sealed upon application of heat. However, conventional binders applied to such fibrous pouches, such as acrylic polymers, are costly to apply to pouches and inhibit biodegradability of the discarded pouch.

It would be desirable to provide a pouched product, particularly one adapted for oral use, wherein the nonwoven fabric used to form the pouched product exhibits favorable characteristics such as enhanced biodegradability and reduced cost to manufacture".

The Board notes that other means may be used to increase the seal strength of nonwoven webs such as the use of staple fibres with specific melting properties. In view of the aim of D2, the skilled person would use other means than adding a further binder.

3.3 Starting from D26

3.3.1 During oral proceedings, the parties referred to their written submissions.

The appellant submitted that D26 was a suitable closest prior art. D26 belonged to the same technical field of packaging materials suitable for use in oral pouched nicotine products and was thus directed towards a similar purpose as the opposed patent. Reference was made, for example, to paragraph [0001] of D26, which discloses that the fleece was used to form individual pouches of smokeless tobacco, and to paragraph [0080], which disclosed that the fleece may also be used to enclose non-tobacco material. Furthermore, an aim of D26 was to provide a packaging material that did not leak material and which was sufficiently strong; paragraphs [0055] and [0064] of D26.

D26 explicitly disclosed in paragraph [0080] that the packaging materials were suitable for use in enclosing non-tobacco materials. The skilled person would consider that there was nothing in D26 that rendered the packaging material unsuitable for enclosing filling material comprising a particulate non-tobacco material and a nicotine source, especially as claim 1 placed no limitation on particle size of the material and that D26 explicitly stated the fleece may be used to enclose non-tobacco material.

The only possible differences between D26 and claim 1 were therefore:

- (i) The inclusion level of the binder being 20-60 wt%; and
- (ii) The selection of a basis weight of above 30 g/m².

The objective technical problem associated with both differences was the provision of an alternative packaging material for the reasons detailed above in respect of D2. The claimed solutions to this problem were obvious in light of D26 in combination with (i) common general knowledge and/or any of D1, D3, D7, D8, D10 or D30, and (ii) common general knowledge and/or any of D2, D7, D9, D11, D28 or D29.

In the event that partial problems were considered inappropriate, the appellant submitted that the claimed solution was nevertheless obvious in view of D26 when combined with common general knowledge, noting that both an amount of binder of 20-60 wt% and a basis weight of above 30 g/m² were entirely conventional in nonwoven packaging materials before the priority date. The claim was also obvious in view of D26 when combined with D7, which taught both the requisite amount of

binder (35-45%) and the requisite basis weight (see, e.g., Example 3).

- 3.3.2 The Board follows the opinion of the opposition division and the respondent (patent proprietor) that D26 is not a promising starting point because of the nonwoven material having large apertures, which would not be appropriate for the type of particles intended to be used in the present invention. Paragraph [0041] of the patent discloses that: *"As used herein, the term "particulate non-tobacco material" refers to a non-tobacco material comprising particles. The particles may have an average particle size within the range of from 50 to 500 μm ".*

Moreover, as mentioned before, the differences between the subject matter of claim 1 and D26:

(i) the binder being 20-60 wt%; and

(ii) the basis weight above 30 g/m²

are not just a juxtaposition of features but are features which together provide specific properties to the nonwoven. The use of partial problems is therefore not appropriate.

Finally, the combination of D26 with D7 to arrive at the subject matter of claim 1 is based on hindsight. There is no reason for the skilled person starting from D26 to pick the only two missing features from D7 to arrive at the subject-matter of claim 1.

3.4 Starting from D1

During oral proceedings, the parties referred to their written submissions.

The appellant argued that D1 was a valid starting point as it related to a similar purpose of providing a fleece for an oral pouched snus product, which may be an oral pouched non tobacco product (see [0061]). D1 discussed seal strength and thus was also directed towards providing an oral pouched product suitable for non-tobacco material that had an acceptable strength.

D1 disclosed a pouch that comprised a dry-laid nonwoven web comprising staple fibres of regenerated cellulose and a binder ([0033]). The nonwoven web may be carded ([0037]) and may include 30-45% binder ([0045]). The fibres had a linear density in the range of 1 to 2.2 dtex, and preferably within the range of 1.6 to 1.8 dtex ([0047]).

Examples 1A and 1B included 100% lyocell carded fibres (based on weight of total fibres), 35% w/w binder, where the linear density of the fibres was 1.7 dtex.

The only differences between these Examples in D1 and claim 1 were:

- (i) the basis weight above 30 g/m² and
- (ii) the cellulose-based staple fibres having a linear density of ≤ 1.3 decitex.

No technical effect could be attributed to these distinguishing features. Additionally, as there was no synergistic interaction between these two features, inventive step should be assessed using partial problems.

The objective technical problem associated with both differences was the provision of an alternative packaging material for the reasons detailed above in respect of D2.

With regard to the linear density, D1 disclosed that the linear mass density of the fibres may be in the range of from 1 to 2.2 dtex (paragraph [0047]). Therefore, when looking to provide an alternative, the skilled person would learn from D1 itself that suitable alternatives may have a linear density of less than 1.3 dtex. As such, this feature was obvious from D1 alone.

In the event that the Board did not consider partial problems to be appropriate in this instance, the appellant submitted that the claimed solution was nevertheless obvious in view of D1 when combined with common general knowledge, noting that both a basis weight of above 30 g/m² and a linear density of 1.3 dtex or less were entirely conventional in nonwoven packaging materials before the priority date (and such linear density was disclosed in D1 itself). The claim was also obvious in view of D1 when combined with any of D2, D7, D9, D11, D28 or D29 since D1 itself pointed the skilled person towards a linear density of less than 1.3 dtex, and then the skilled person only needed to turn to one other document to find motivation for the remaining feature of an increased basis weight. Alternatively, the claim was obvious in light of D1 in combination with D9, which discloses both a basis weight of above 30 g/m² and a linear density of less than 1.3 dtex.

- 3.4.1 The Board confirms its preliminary opinion as stated in the communication under Article 15(1) RPBA. While D1 may be used as a starting point, it is not a promising starting point, as a main aspect of the invention in D1 is the use of low basis weight nonwoven layers, at most 25 g/m² for the packaging material (reference is made to paragraph [0033] and claim 1 of D1).

The two identified differences between the subject-matter of claim 1 and D1, namely the basis weight of the packaging material and the linear density of the cellulose-based staple fibres cannot be regarded in isolation as they both impact in combination the porosity of the packaging, influencing directly the air permeability and the leakage.

Starting from D1, the skilled person has no incentive to increase the basis weight of the nonwoven layer and to select a linear density of the viscose fibre lower than or equal to 1.3 dtex as it would mean rendering the nonwoven material less permeable contrary to the aim of D1.

3.5 Starting from the prior uses

During oral proceedings, the parties referred to their written submissions.

- 3.5.1 The appellant argued that in providing a commercially available packaging material for an oral pouched nicotine product, it would be inherent that a purpose of that packaging material would be to provide sufficient strength and seal strength to avoid leakage and remain stable, whilst being comfortable within a user's mouth. This was the common aim for any manufacturer in the field of pouched nicotine products. This was the same purpose as the opposed patent was (paragraph [0046]). It therefore followed that the three prior use products represented suitable starting points for the assessment of inventive step.

The subject-matter of claim 1 differed from Siberia, Wow! Sunny Honey and Oden's products only in that the

cellulose-based staple fibres had a linear density $\leq$ 1.3 decitex.

No technical effect could be attributed to the specific use of cellulose-based staple fibres having a linear density of $\leq$ 1.3 decitex based on the data in the opposed patent.

In view of the above, the objective technical problem must be formulated as the provision of alternative packaging materials.

The use of cellulose-based staple fibres having a linear density $\leq$ 1.3 decitex in packaging materials was common general knowledge for the skilled person as indeed disclosed in a number of the cited prior art documents. Therefore, this feature of claim 1 could not render the claims inventive in view of *Siberia*, *Wow! Sunny Honey* and *Oden's* products taken alone or combined with for example, D9, D1 or D26.

- 3.6 The Board is of the opinion that the prior use products "*Siberia*", "*Wow! Sunny Honey*" and "*Oden's*" are not promising starting points as they are directed to snus products with a filling material comprising moist tobacco.

According to paragraph [0023] of the patent, the requirements on the packaging material suitable for snus products comprising particulate non-tobacco material and nicotine are more demanding in order to prevent leakage of these finer materials.

In any case, starting from the packaging of these products, the subject matter of claim 1 differs in that:

- the packaging is suitable for enclosing material comprising a particulate non-tobacco material and nicotine, and
- the linear density of the cellulose-based fibres is $\leq 1,3$ dtex.

The approach taken by the appellant (opponent) is based on hindsight. The Board is of the opinion that reducing the linear density of fibres has an impact on the nonwoven material and its properties. Indeed, lowering the linear density of the fibres will tend to make the pores of the nonwoven material smaller and will reduce the permeability and reduce the leakage of smaller particles.

Starting from the prior uses, there is no incentive for the skilled person to make the snus packaging suitable for particulate non-tobacco material and nicotine source when the products are filled with moist tobacco.

In any case, should the skilled person turn to documents D9, D1 or D26 there is no reason for the skilled person to only include the feature regarding the low linear density and ignore the rest of the teaching provided in the documents, in particular the features of the packaging nonwoven material. Such an approach would be based on hindsight.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar:

The Chairman:



D. Grundner

G. Pricolo

Decision electronically authenticated