Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 6 March 2024

Case Number: T 1354/21 - 3.3.10

Application Number: 12004732.9

Publication Number: 2508582

IPC: C09J7/02

Language of the proceedings: EN

Title of invention:
Method for attaching a double-sided pressure-sensitive adhesive tape comprising a release liner with a notch and/or slit

Patent Proprietor:
Nitto Denko Corporation

Opponent:
tesa SE

Headword:

Relevant legal provisions:
EPC Art. 56, 100(a)

Keyword:
Inventive step - main request (no) - auxiliary requests (no)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1354/21 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 6 March 2024

Appellant: (Opponent)	tesa SE Hugo-Kirchberg-Strasse 1 22848 Norderstedt (DE)
Representative:	Stubbe, Andreas tesa SE Kst. 9500 Hugo-Kirchberg-Strasse 1 22848 Norderstedt (DE)
Respondent: (Patent Proprietor)	Nitto Denko Corporation 1-2, Shimohozumi 1-chome Ibaraki-shi Osaka 567-8680 (JP)
Representative:	Grünecker Patent- und Rechtsanwälte PartG mbB Leopoldstraße 4 80802 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 14 July 2021 rejecting the opposition filed against European patent No. 2508582 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	M. Kollmannsberger
Members:	A. Zellner
	T. Bokor

Summary of Facts and Submissions

I. The opponent appealed against the decision of the opposition division to reject the opposition against the European patent No. 2 508 582 (Article 101(2) EPC).

II. Notice of opposition had been filed on the basis of Article 100(a) EPC for lack of inventive step (Article 56 EPC) and of Article 100(b) EPC for lack of sufficiency of disclosure.

III. Reference is made to the following documents:

D2: DE 37 24 528 A1
D3: EP 2 039 506 A1
D13: Comparative experiments (Vergleichsversuch), submitted by the appellant during the opposition proceedings on 22 February 2021
D14: Additional Experimental Data, submitted by the respondent during the opposition proceedings on 22.04.2021

IV. In the appealed decision, the opposition division held that none of the grounds of opposition raised by the opponent prejudiced the maintenance of the patent as granted. The subject-matter of claim 1 of the contested patent was found to meet the requirements of sufficiency of disclosure and to be based on an inventive step in view of document D2 as closest prior art. The opposition division held that document D3 may not qualify as a valid closest prior art.

V. In support of its appeal, the appellant argued that the opposition division erred in their decision when holding the main request (patent as granted) to be

sufficiently disclosed and when holding the claimed subject-matter to be based on an inventive step.

VI. The main request (patent as granted) contains one independent claim, which reads as follows:

"A method for applying a double-sided pressure-sensitive adhesive tape, comprising:

attaching a double-sided pressure-sensitive adhesive tape bent in the width direction to an adherend having a bend and/or curve so as to fit the bend or curve in the adherend, wherein the double-sided pressure-sensitive adhesive tape has:

a pressure-sensitive adhesive body; and a release liner arranged on at least one side of the pressure-sensitive adhesive body,

wherein the release liner includes a notch and/or slit in at least one edge in a width direction of the release liner, and the release liner is held on one of the sides of the pressure-sensitive adhesive body opposing the adherend, and

wherein the release liner is an olefinic release liner."

VII. Claim 1 of auxiliary requests 1 to 6 differs from claim 1 of the main request in that it contains the following additional features:

Auxiliary request 1:

"... wherein the release liner includes two or more notches and/or slits."

Auxiliary request 2:

*"... wherein the release liner includes two or more notches and/or slits;
and wherein the ratio of the notch and/or slit with respect to the full width of the release liner is 5 to 90%."*

Auxiliary request 3:

*"... wherein the release liner includes two or more notches and/or slits;
wherein the notch and/or slit does not cut across the full-width of the release liner."*

Auxiliary request 4:

*"... wherein the release liner includes two or more notches and/or slits;
wherein the notch and/or slit does not cut across the full-width of the release liner;
and wherein the ratio of the notch and/or slit with respect to the full width of the release liner is 5 to 90%."*

Auxiliary request 5:

*"... wherein the release liner includes two or more notches and/or slits;
wherein the notch and/or slit does not cut across the full-width of the release liner;
wherein the release liner includes the notch and/or slit in both edges in the width direction."*

Auxiliary request 6:

"... wherein the release liner includes two or more notches and/or slits;
wherein the notch and/or slit does not cut across the full-width of the release liner;
and wherein the ratio of the notch and/or slit with respect to the full width of the release liner is 5 to 90%."

VIII. The appellant argued essentially as follows:

The provision of a method according to claim 1 of the main request was not based on an inventive step, considering either of documents D2 or D3 as closest prior art, and the differing feature being the nature of the release liner (with respect to D2), or the presence of slits or notches (with respect to D3), respectively. Since no particular technical effect was achieved by the respective differing feature, and the features as such were known to the skilled person, inventive step had to be denied. The appellant also argued that the main request did not disclose the alleged invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

IX. The respondent (patent proprietor) argued essentially as follows:

Document D2 was the closest prior art for the method of claim 1 of all requests. It did not disclose an olefinic liner material. Document D14 demonstrated that the use of an olefinic release liner led to a reduction in "floating". Since this technical effect was not known to be linked to the nature of the release liner material, inventive step had to be acknowledged. The

same applied to the methods claimed in the auxiliary requests.

X. The appellant requests that the decision under appeal be set aside and the patent be revoked.

XI. The respondent requests to dismiss the appeal, and to maintain the patent as granted, alternatively in an amended form based on one of auxiliary requests 1-6 filed with the reply to the grounds of appeal dated 8 April 2022.

Reasons for the Decision

1. The appeal is admissible.

Main request (patent as granted)
Inventive step (Article 100(a) and 56 EPC)

2. The opposition division considered document D2 to represent the closest prior art. The difference between the method according to claim 1 of the main request and the method disclosed in D2 was seen in the nature of the release liner of the double-sided pressure-sensitive tape to be used in the method, in particular that the release liner was an olefinic release liner. The technical problem was defined as the provision of a release liner with enhanced floating suppression when the tape including such a release liner was applied to an adherend with a bend in width direction. Document D2 itself was found not to provide a pointer to opt for an olefinic release liner. Neither D3 nor D6 was considered to relate to the problem of applying an adhesive tape to an adherend having a bend and/or curve in width direction, and, according to the opposition division, the skilled person did not expect to find a

solution to the technical problem in these documents. As a result, an inventive step was acknowledged.

3. The appellant contested this finding and argued starting from either D2 or D3 as closest prior art.

The appellant did not contest the Opposition Division's finding regarding the distinguishing feature between the claimed method and the disclosure of document D2. The distinguishing feature was the nature of the release liner, which was an olefinic release liner according to claim 1. The appellant argued that this difference did not lead to a particular technical effect, since document D14, which was cited by the respondent, did not convincingly show an effect based on the nature of the release liner. Although in that document a polyethylene release liner was compared to a polyester film, the latter was additionally silicone-coated. As shown by document D13, such a coating led to a considerably lower pull-off force. The appellant concluded that it was this coating, which was the major, if not the only, reason for any of the reduction in "floating" as demonstrated in D14. The effect could thus not be linked to the nature of the release material as such. Consequently, no technical effect based on the distinguishing feature could be taken into consideration.

According to the appellant, document D2 already solved the technical problem of reducing "floating" when the tape it disclosed was applied to an adherend while following turns or bends, *i.e.* by a release liner having slits in the edges. The objective technical problem could thus only be seen in the selection of one of any known materials for a release liner. Since polyolefin based release liners were known in the art,

as disclosed in documents D15, D3 and D6, the appellant concluded that the provision of a method according to claim 1 of the main request was not based on an inventive step.

Even if, as argued by the respondent, a technical effect were acknowledged, the presence of an inventive step still had to be denied. The appellant argued that the use of a polyolefin based release liner for an adhesive tape was already suggested by D3, in particular if the tape had to be applied to an adherend in curved form. D3 also disclosed release liners in the form of a laminated film, which was also an option according to the patent.

The appellant submitted that, when considering document D3 to be the closest prior art, the technical problem was the provision of an improved tape which could be applied on an adherend following turns or bends. Since the proposed solution to this problem, *i.e.* the provision of a tape comprising a release liner having slits or notches in at least one edge of the release liner, was known from document D2, inventive step could not be acknowledged.

4. The respondent considered the disclosure of document D2 to be closest prior art, and the difference between the method according to the main request and the disclosure of D2 the use of an olefinic release liner in the claimed method. The olefinic release liner reduced floating, as demonstrated by document D14. The fact that the polyester release liner used in D14 had an additional silicon layer had only very limited effect on floating. The silicon layer had only been added to adjust surface properties of the two liners and thus to allow for a comparison of the two polymers as such. On

the other hand, document D13, referred to by the appellant, did not provide any information on floating, since it only analysed the pull-off force of an ethylenic release liner compared to a liner made of polyester. The prior art did not attribute the technical effect of reduced floating to the use of polyethylene, so that inventive step had to be acknowledged.

5. The board comes to the following conclusion:

The contested patent

5.1 The patent in dispute relates to a method for applying double-sided pressure-sensitive adhesive tapes, in particular tapes with release liners, and for attaching the tape on an article having a bend or curve in the width direction (see paragraphs [0001] to [0003]). It addresses the problem of formation of wrinkles or "floating" when the tape is attached to an adherend having a bend or curve. This is caused by the relative rigidity of the release liner (see paragraphs [0005] and [0003]). In order to solve that problem, the patent suggests a method according to claim 1, wherein the double-sided pressure-sensitive adhesive tape has a release liner including a notch and/or slit in at least one edge in a width direction of the release liner, and wherein the release liner is an olefinic release liner.

The closest prior art

5.2 The disclosure of document D2 comes closest to the claimed method. The document relates to a flexible release liner for a flexible double-sided adhesive tape. It addresses problems related to attaching the tape to an adherend following curves, which, as

disclosed in the document, is the result of rigid, inflexible release liners (see the claim and lines 32 to 40 in column 1 of the description). According to column 1, lines 47 to 54 and 59 to 64 of D2, the problem can be solved by the use of a release liner, which can, despite being made of a rigid material, follow bends due to the presence of slits at the sides of the release liner.

5.3 Since the claimed subject-matter is, as explained below, not based on an inventive step considering document D2 as closest prior art, there is no need to examine other documents, such as D3, for that purpose.

The distinguishing feature and the objective technical problem

5.4 The difference between the method according to claim 1 and the disclosure of document D2 is the nature of the release liner, which is *"an olefinic release liner"* according to claim 1 of the main request. Document D2 discloses a rigid film in general (see lines 32 and 47 to 50). This was undisputed.

5.5 The parties disagreed as to the technical effect caused by this feature. According to the respondent, the use of an olefinic release liner instead of release liners made of other materials led to a reduction of "floating" when applying the tape to an adherend having a bend and/or curve. The respondent referred to document D14, as well as to paragraphs [0029] and [0014] of the patent in dispute. The appellant, on the other hand, denied that such a technical effect was present and referred to document D13.

5.6 The board notes the following:

5.6.1 The patent in suit discloses in paragraph [0029] that an olefinic release liner is preferable because of its adequate flexibility to prevent floating of the release liner compared to polyester release liners, which have a higher rigidity. According to experiment 1 of the patent, the use of a 150 µm polyethylene release liner containing slits, on a high-adhesion acrylic foam tape did not lead to floating under test conditions.

5.6.2 Additional Experiment 1 of document D14 discloses that the use of a 75 µm polyester film release liner - with silicon coating - in a set-up according to example 1 of the contested patent leads to floating.

5.6.3 According to the respondent, the skilled person would expect the thinner material (silicon-coated polyester, 75 µm, as used in D14) to lead to less floating than the thicker material (polyethylene 150 µm, as used in experiment 1 of the contested patent). The respondent concluded that the comparison clearly showed that the use of a polyolefinic release liner, although thicker, was more advantageous than a (thinner) polyester film.

5.6.4 The appellant submitted that this effect was not, or at least not entirely, due to the differing polymeric material, because the polyester film used in document D14 was additionally silicone-coated. A comparison of the two materials was thus flawed. The appellant supported this argument by reference to Document D13.

5.6.5 Document D13 discloses differences in pull-off force between a silicon-coated polyester liner and a polyethylene liner of similar thickness, but without silicon coating. As disclosed on page 2 of the

document, the pull-off force measured with the silicon-coated polyester liner is considerably smaller (1 to 4 cN/cm) than the force measured with the polyethylene liner (150 to 250 cN/cm). D13 also discloses that after having applied materials coated with the different liners to an adherend, the silicon-coated polyester liner separated more easily from the adhesive tape than the polyethylene liner, irrespective of whether the respective liners included additional slits or not.

5.7 The board concludes that the use of an olefinic release liner is advantageous. The statement in paragraph [0029] of the contested patent is credible. It has also not been traversed by the appellant. D14, together with example 1 of the contested patent, discloses that a polyethylene liner does not lead to floating, whereas a polyester liner does. The fact that the polyester liner has an additional silicon layer does not disprove that the nature of the material as such, *i.e.* polyethylene *vs.* polyester, already leads to the observed effect. D13 does also not disprove the influence of the polymer material on floating. D13 even teaches that a polyester liner leads to more separation. Both D13 and D14 indicate that the effect may be more pronounced by the silicon-coating. They do not disprove, however, that the polymer as such causes the effect. The board is thus satisfied that the technical effect of the use of polyethylene rather than the more rigid polyester is, as stated in paragraph [0029] of the patent in suit, to prevent or at least reduce floating.

5.8 The objective technical problem with respect to D2 is thus the provision of an improved method for applying a double-sided pressure-sensitive adhesive tape, which leads to reduced floating when the adhesive tape is applied to an adherend having a bend and/or curve.

Solution to the technical problem

5.9 The solution provided is a method according to claim 1, which is characterised in that the release liner of the double-sided pressure-sensitive tape is an olefinic release liner, compared to a rigid, inflexible liner as disclosed in D2 (see lines 32 to 33).

5.10 The board is satisfied that the claimed method solves the technical problem (see point 5.7 above).

Obviousness of the claimed solution

5.11 The provision of a method according to claim 1 of the main request is not inventive.

Document D2 discloses that problems arising when attaching a double-sided adhesive tape to an adherend having a bend or curve can be reduced by the provision of release liners including slits on the edges. The document also discloses that a reason for the problems was the nature of the release liner, *i.e.* rigid and inflexible material (see lines 32 to 40). It was not disputed by the parties that it is this rigidity and lack of flexibility of the release liner that leads to a disconnection between the release liner and the pressure-sensitive adhesive body. In order to further reduce this problem ("floating"), and thus to provide an improved method compared to the method of D2, the skilled person would choose a release liner material with lower rigidity and higher flexibility. It is commonly known that the olefinic polymer polyethylene is generally less rigid and more flexible than polyester, as argued by the appellant by reference to D14 (paragraph 3), and not disputed by the appellant.

The choice of an olefinic material, such as polyethylene, which undisputedly fulfils the requirements concerning rigidity and flexibility, is thus obvious. Furthermore, the use of olefinic release layers is also known in the art (see document D3, paragraph [0024]).

The provision of a method according to claim 1 of the main request is thus not based on an inventive step, and consequently the main request does not meet the requirements of Article 56 EPC.

6. Since the main request does not meet the requirements of Article 56 EPC, and is thus not allowable, the objection based on Article 100(b) EPC need not be examined.

Auxiliary requests
Inventive step (Article 56 EPC)

7. The appellant submitted that the closest prior art, D2, also disclosed the combination of all of the additional features of claim 1 of all the auxiliary requests, and that, as a consequence, the presence of an inventive step had to be denied as for the main request.

The board agrees. The reasons are as follows:

7.1 Claim 1 of auxiliary request 1 contains, compared to claim 1 of the main request, the additional feature *"... wherein the release liner includes two or more notches and/or slits."* D2 discloses in column 1, lines 51 and 52 that the liner comprises slits/cuts (*"Einschnitte"*), *i.e.* more than one. The feature is also disclosed in the figure of D2, which shows a

plurality of slits.

7.2 Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 by the additional feature *"... and wherein the ratio of the notch and/or slit with respect to the full width of the release liner is 5 to 90%."* Document D2 does not disclose exact figures for the length of the slits. However, the figure of D2 discloses slits which visibly extend from the side of the release liner to less than half of it. The figure thus discloses a ratio for the length of the slits to the full width of the release liner which is within the claimed range of between 5 and 90%.

7.3 Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 1 by the additional feature *"... wherein the notch and/or slit does not cut across the full-width of the release liner."* This feature is also disclosed in the figure of document D2. Furthermore, D2 discloses in column 1, lines 55 to 58, that the liner retains an uninterrupted bridge in its middle part.

7.4 Claim 1 of auxiliary request 4 contains the combination of features of auxiliary requests 2 and 3, which are also disclosed in document D2, as explained in points 7.2 and 7.3 above.

7.5 Claim 1 of auxiliary request 5 contains the features of claim 1 of auxiliary request 3, which is, as indicated in point 7.3 above, disclosed in document D2. The claim furthermore contains the additional feature *"... wherein the release liner includes the notch and/or slit in both edges in the width direction."* This feature is disclosed in the figure of document D2, as well as in column 1, lines 51 and 52.

7.6 Claim 1 of auxiliary request 6 is a combination of the features of claim 1 of auxiliary requests 4 and 5. These features are therefore disclosed in D2, as explained in points 7.4 and 7.5 above.

7.7 In sum, document D2 discloses all of the features of claim 1 of auxiliary requests 1 to 6 in combination.

7.8 As a consequence, the methods according to these claims differ from the method disclosed in document D2 only by the nature of the release liner, which is *"an olefinic release liner"*. This is the same difference as for claim 1 of the main request.

7.9 Since the distinguishing feature is the same, the claimed methods lack inventive step for the same reason as the method according to claim 1 of the main request. Auxiliary requests 1 to 6 are thus not allowable (Article 56 EPC).

8. Since none of the respondent's requests is allowable, the appeal of the opponent is successful. The appealed decision is thus to be set aside and the patent is to be revoked, Articles 101(2) and 101(3)(b) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar: The Chairman:

C. Rodríguez Rodríguez M. Kollmannsberger

Decision electronically authenticated