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**Datasheet for the decision
of 15 December 2017**

Case Number: T 0858/16 - 3.3.09

Application Number: 11004388.2

Publication Number: 2366749

IPC: C09J7/02, C09J133/06

Language of the proceedings: EN

Title of invention:

Acrylic pressure-sensitive adhesive tape or sheet and process
for producing the same

Patent Proprietor:

Nitto Denko Corporation

Opponent:

tesa SE

Headword:

Relevant legal provisions:

EPC Art. 76(1), 100(c)

Keyword:

Main and auxiliary requests: Subject-matter extends beyond
content of earlier application (yes)

Decisions cited:

Catchword:



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Case Number: T 0858/16 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 15 December 2017

Appellant:
(Patent Proprietor)

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Representative:

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Respondent:
(Opponent)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 1 February 2016
revoking European patent No. 2366749 pursuant to
Articles 101(2) and 101(3) (b) EPC**

Composition of the Board:

Chairman W. Sieber
Members: J. Jardón Álvarez
D. Prietzel-Funk

Summary of Facts and Submissions

- I. This decision concerns the appeal filed by the proprietor of European patent No. 2 366 749 against the decision of the opposition division to revoke the patent. The patent had been granted on a divisional application of the earlier European patent application No. 08720305.5.
- II. With the notice of opposition the opponent had requested revocation of the patent in its entirety on the grounds of Article 100(a) (lack of novelty and inventive step) and Article 100(c) EPC.
- III. The opposition division's decision was based on a main request and an auxiliary request.

Claim 1 of the main request read as follows:

"1. An acrylic pressure-sensitive adhesive tape or sheet,

characterized by having a viscoelastic layer (X) containing microspheres and an acrylic polymer containing an alkyl (meth)acrylate as a principal monomer component as a base polymer and a pressure-sensitive adhesive layer (Y) formed at least on one side of the viscoelastic layer (X) by polymerization of an acrylic monomer mixture containing 2-ethylhexyl acrylate, n-butyl acrylate and acrylic acid or a prepolymer of the acrylic monomer mixture,

wherein the thickness of the pressure-sensitive adhesive layer (Y) is 10 μm to 5 mm,

wherein the amount of acrylic acid is 6 to 12 wt% with respect to all monomer components, and

wherein the total amount of 2-ethylhexyl acrylate and n-butyl acrylate is 20 to 94 wt% with respect to all monomer components."

Claim 1 of the auxiliary request differed from claim 1 of the main request in that the following feature had been added at the end of the claim:

"wherein the amount of n-butyl acrylate is 35 to 65 wt% with respect to the total amount of 2-ethylhexyl acrylate and n-butyl acrylate."

IV. The opposition division revoked the patent because in its opinion the subject-matter of claim 1 of both requests did not comply with Article 76(1) EPC. Its decision can be summarised as follows:

- According to claim 1 of both requests the pressure-sensitive adhesive layer (Y) was formed by polymerisation, but the parent application as filed disclosed only irradiation/photopolymerisation. The parent application as filed provided no basis for replacing irradiation/photopolymerisation with the more general term "polymerization". In fact, irradiation/photopolymerisation was an essential feature and indispensable for the formation of the pressure-sensitive adhesive layer (Y).
- Thus, the term "polymerization" according to claim 1 of both requests was a generalisation not supported by the content of the parent application as filed.

V. The patent proprietor (in the following: the appellant) lodged an appeal and requested that the opposition division's decision be set aside and that the patent be

maintained on the basis of the main request or the auxiliary request before the opposition division, both re-filed with the statement setting out the grounds of appeal.

- VI. With its reply dated 17 October 2016 the opponent (in the following: the respondent) requested that the appeal be dismissed.
- VII. In the annex to the summons to oral proceedings the board gave its preliminary view that it agreed with the finding of the opposition division that the subject-matter of both requests extended beyond the content of the parent application as filed.
- VIII. On 15 November 2017 the appellant filed a further submission in preparation for the oral proceedings.
- IX. On 15 December 2017 oral proceedings were held before the board. The main and the auxiliary request were those before the opposition division (see points III and V above).
- X. The appellant's relevant arguments may be summarised as follows:
- The parent application as filed disclosed in its broadest embodiment according to paragraph [0008] that, in order to solve the problems underlying the invention, it was necessary to absorb both high- and low-polar control agents and that this was done by absorbing the high-polar surface control agent with an acrylic acid monomer unit and the low-polar surface control agent with n-butyl acrylate monomer and 2-ethylhexyl acrylate monomer units.

- Admittedly, the only polymerisation method exemplified in the patent was photopolymerisation, but a skilled person in the field of acrylic pressure-sensitive adhesives would understand, without any doubt, that what in fact was needed to solve the technical problem underlying the invention was polymerisation and that the question of how to polymerise the monomeric composition defined in paragraph [0008] was of no technical relevance for the claimed subject-matter. The term polymerisation was thus an admissible intermediate generalisation between the broad disclosure of paragraph [0008] defining the monomeric units to be used and the specific embodiment of paragraphs [0009] onwards, which gave the example of photopolymerisation.

- The opposition division had erred in its decision because photopolymerisation was not disclosed as essential in the parent application. The question of how to polymerise the monomeric composition was of no technical relevance for the claimed subject-matter.

XI. The respondent's arguments may be summarised as follows:

- The finding in the appealed decision that photopolymerisation was an essential feature indispensable for the formation of the pressure-sensitive adhesive layer was correct. The entire specification of the parent application disclosed the importance of preparing layer (Y) by photopolymerisation of a specific monomeric mixture. The problem underlying the invention was solved using both photopolymerisation and the

specific monomeric composition defined in claim 1 of the parent application.

- Additionally, the appellant had not shown that the problem underlying the invention would also be solved by using other polymerisation methods. In fact, different polymerisation methods would result in different polymer products and there was no information at all that these products would work like the ones obtained by photopolymerisation.

XII. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or the auxiliary request underlying the impugned decision and re-filed on 10 June 2016 with the statement setting out the grounds of appeal.

The respondent requested that the appeal be dismissed.

Reasons for the Decision

MAIN AND AUXILIARY REQUEST

1. *Amendments (Articles 76(1)/100(c) EPC)*

1.1 The patent in suit was granted on a divisional application of the earlier European patent application No. 08720305.5. In accordance with Articles 76(1)/100(c) EPC, the subject-matter of the patent in suit may therefore not extend beyond the content of the earlier (parent) application as filed.

The relevant criterion in this context is whether the skilled person can derive the claimed subject-matter

directly and unambiguously, using common general knowledge, from the parent application as filed as a whole, either explicitly or implicitly.

1.2 Claim 1 of both the main and the auxiliary request require *inter alia* "a pressure-sensitive adhesive layer (Y) formed at least on one side of the viscoelastic layer (X) by **polymerization** of an acrylic monomer mixture containing 2-ethylhexyl acrylate, n-butyl acrylate and acrylic acid or a prepolymer of the acrylic monomer mixture" (emphasis added by the board).

1.3 The appellant did not dispute that the term "polymerization" was not explicitly disclosed in the parent application as filed, which only disclosed that layer (Y) was formed by irradiation/photopolymerisation. However, it maintained that the amendment did not extend beyond the content of the parent application as filed because the skilled person would understand from the parent application as filed that there was no necessity to restrict polymerisation to irradiation/photopolymerisation.

1.4 The only issue to be decided is therefore to examine whether the term "polymerization" used in claim 1 is supported by the parent application as filed. In other words, the question to be answered is whether the replacement of irradiation/photopolymerisation by the more general term "polymerization" is directly and unambiguously derivable from the parent application as filed.

1.5 *The parent application as filed*

1.5.1 According to paragraph [0007] of the parent application, the problem of the invention is basically

to provide an acrylic pressure-sensitive adhesive sheet with high adhesive strength to hard-to-adhere surfaces, such as automotive coatings.

- 1.5.2 Paragraphs [0008] to [0013] then disclose the means to solve this problem.

Paragraph [0008] states that "the inventors have found that it was needed to absorb both high- and low-polar control agents to make a pressure-sensitive adhesive sheet show high adhesive strength to hard-to-adhere adherend such as coatings having the surface control agent bleeding thereon and that it was possible to absorb the high-polar surface control agent with an acrylic acid monomer unit and the low-polar surface control agent with n-butyl acrylate monomer and 2-ethylhexyl acrylate monomer units".

Paragraph [0009] discloses that "[s]pecifically, the invention provides an acrylic pressure-sensitive adhesive tape or sheet having viscoelastic layer (X) ... and a pressure-sensitive adhesive layer (Y) formed on at least one side of the viscoelastic layer (X) **by irradiation** of an acrylic monomer mixture containing 2-ethylhexyl acetate, n-butyl acrylate and acrylic acid, or its prepolymer, **with active energy ray**, wherein acrylic acid is contained in the acrylic monomer mixture ... in an amount of 6 to 12 wt% with respect to all monomer components and n-butyl acrylate, in an amount of 35 to 65 wt% with respect to the total amount of 2-ethylhexyl acrylate and n-butyl acrylate" (emphasis added by the board; see also claim 1).

Paragraph [0013] also specifies that the method of producing the acrylic pressure-sensitive adhesive tape or sheet is "characterized by forming a pressure-

sensitive adhesive (Y), **by irradiation** of an acrylic monomer mixture ... **with active energy ray"** (emphasis added by the board).

- 1.5.3 The best mode of carrying out the invention is then described in paragraphs [0015] to [0115]. The acrylic pressure-sensitive adhesive sheet and the pressure-sensitive adhesive layer (Y) are described in paragraphs [0015] to [0051]. In these paragraphs reference is consistently made to photopolymerisation. In particular, it is stated that the adhesive composition contains a photopolymerisation initiator (paragraphs [0016] and [0030] to [0032]) and that the layer is obtained by photocuring caused by irradiation, i.e. photopolymerisation (paragraphs [0024] and [0048] to [0050]).
- 1.5.4 In summary, the parent application requires layer (Y) to be formed by photopolymerisation and is completely silent about any other polymerisation method.
- 1.6 Notwithstanding this clear and unambiguous teaching in the parent application, the appellant maintained that the skilled person would understand from the general disclosure in paragraph [0008] (see point 1.5.2 above) of how to solve the problem of the invention that the manner of polymerising the acrylic composition was not relevant for the invention. Rather the inventive aspect was the use of a certain acrylate composition to absorb both high- and low-polar control agents.

In other words, the appellant saw in paragraph [0008] of the parent specification the broadest embodiment of the invention while paragraphs [0009] onwards disclosed specific embodiments of this general disclosure. The embodiment now claimed wherein layer (Y) was prepared

by "polymerization" amounted to an allowable "intermediate generalization" within the broad teaching of the parent application.

1.7 The board disagrees for the following reasons:

1.7.1 According to the practice of the boards, the standard for assessing compliance with Article 123(2) EPC (and the same applies to Article 76(1) EPC) is that any amendment to the parts of a European patent application can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, from the whole of the document as filed (see Case Law of the Boards of Appeal of the EPO, 8th edition 2016, Chapter II.E.1.2.1, "Gold standard").

1.7.2 From the disclosure of the parent application as summarised in point 1.5 above, the skilled person derives that photopolymerisation is mandatory to form layer (Y) of the claimed acrylic pressure-sensitive adhesive tapes or sheets.

1.7.3 Contrary to the view of the appellant, paragraph [0008] does not allow for a different interpretation of the parent application.

In this paragraph, the inventors' solution to the problems underlying the invention is given in a very general way, namely by merely saying that it is necessary to absorb both high- and low-polar control agents. How this solution is put into practice is then disclosed in the rest of the specification.

The disclosure of paragraph [0008] alone does not enable the skilled person to put the invention into

practice. Thus, for instance, paragraph [0008] discloses that the problem is solved by using an acrylic composition comprising acrylic acid monomer, n-butyl acrylate and 2-ethylhexylacrylate, without specifying the amounts of each monomer. The further specification teaches that only compositions comprising the amounts of monomers specified in paragraph [0009] and claim 1 actually solve the problem while other compositions also falling within the broad disclosure of paragraph [0008] do not (cf. comparative examples 3 to 5).

This is also the case for the method of formation of the layers, which is not disclosed in paragraph [0008]. The skilled person does not interpret this lack of information as a disclosure that any polymerisation method can be used to prepare the layers. On the contrary, the specification goes on to emphasise that polymerisation using irradiation and using a defined acrylic monomer mixture are two of the features that solve the problem underlying the invention of the parent application (see again paragraph [0009]).

This is also indirectly confirmed by paragraphs [0044] and [0020] of the parent application. Thus, paragraph [0044] states that:

"The acrylic pressure-sensitive adhesive composition may contain various additives in the ranges so as that they **do not inhibit photopolymerization.**" (emphasis added by the board)

confirming that only photopolymerisation is intended for the formation of layer (Y).

And in paragraph [0020] reference is made to other pressure-sensitive adhesive layers that could be present in the sheet, and these layers other than layer (Y) "can be formed, for example, by a known method of forming a pressure-sensitive adhesive layer by using a known adhesive". Thus, according to this paragraph, other layers, but not layer (Y), can be formed by other polymerisation methods.

- 1.7.4 In summary, the skilled person concludes from reading the parent application that formation of layer (Y) by photopolymerisation is indeed essential to solve the problem of the invention. This finding is unaffected by the skilled person's knowledge that acrylates can be polymerised in different ways. This knowledge does not provide the skilled person with any further information concerning the disclosure of the parent application.

For these reasons, there is also no basis in the parent application for seeing the claimed subject-matter as an allowable intermediate generalisation within the broad teaching of the parent application.

- 1.8 Therefore, the board concludes that the subject-matter of claim 1 of both requests extends beyond the content of the parent application as filed (Articles 76(1)/100(c) EPC). Consequently, both requests are not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated