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**Datasheet for the decision
of 2 August 2007**

Case Number: T 0515/05 - 3.3.09

Application Number: 95115715.5

Publication Number: 0707053

IPC: C09J 11/00

Language of the proceedings: EN

Title of invention:
Paint film-protective sheet

Patentee:
NITTO DENKO CORPORATION, et al

Opponent:
tesa AG

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 83, 111, 113
EPC R. 67
RPBA Art. 10

Keyword:
"Procedural violation - yes"
"Remittal - no (unnecessary delay)"
"Novelty - yes; inventive step - yes"
"Sufficiency - yes"

Decisions cited:
T 0279/89

Catchword:
Reasons 4, 5



Case Number: T 0515/05 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 2 August 2007

Appellant: tesa AG
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Representative: -

Respondent: NITTO DENKO CORPORATION
(Patent Proprietor) 1-2, Shimohozumi 1-chome
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Representative: Grünecker, Kinkeldey
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 24 February 2005
rejecting the opposition filed against European
patent No. 0707053 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: P. Kitzmantel
Members: J. Jardón Álvarez
W. Sekretaruk

Summary of Facts and Submissions

I. The grant of European patent No. 0 707 053 in respect of European patent application No. 95115715.5 in the name of NITTO DENKO CORPORATION and KANSAI PAINT CO. LTD., which had been filed on 5 October 1995, was announced on 11 April 2001 (Bulletin 2001/15) on the basis of 7 claims, Claim 1 reading as follows:

"1. Use of a sheet for protecting the surface of a sparingly adhesive paint film having a contact angle of n-hexadecane to the paint film surface of at least 15°, said sheet comprising a supporting substrate having formed on one surface thereof a rubber-based pressure-sensitive adhesive layer comprising a rubber-based polymer having a low polarity and which does not contain unsaturated bonds or contains a small amount of unsaturated bonds, and at least one high-polar additive having a molecular weight of at least 500 g/mol and a solubility parameter of at least 9.5 (cal/cm³)^{1/2}, selected from the group consisting of an amine series compound, a phenol series hindered compound, and a mixture of a phenol series compound and an amine series compound."

Claims 2 to 7 were dependent claims.

II. A notice of opposition, requesting revocation of the patent in its entirety on the grounds of Article 100(a) EPC, was filed against the patent by tesa AG on 10 January 2002.

During the opposition proceedings *inter alia* the following documents were cited:

D1: JP - 06-240216

D2: German translation of D1

D2engl: English translation of D1

D3: Handbook of Pressure Sensitive Adhesive
Technology (3rd ed. 1999), pages 321 - 345

D4: EP - A - 0 519 278 and

D7: Experimental report by Mr. K. Shibata, filed as
Annex 1 to the letter of the Patent Proprietors
dated 27 November 2003.

[Document D2engl is a computer translation of D1 and very difficult to understand. Thus, in the present decision the references to D2 refer to the German translation of D1. Some trade names in D1 have been transposed wrongly, including "Ilkanox 1010" which should read "IRGANOX 1010" and "Clayton G 1657" which should read "Kraton G 1657"]

III. By its decision announced orally on 3 February 2005 and issued in writing on 24 February 2005, the Opposition Division held that the grounds of opposition did not prejudice the maintenance of the patent as granted and rejected the opposition.

The Opposition Division held in the appealed decision that the disclosure of D1, as represented by its German translation D2, was not novelty destroying for the claimed subject-matter, because it did not implicitly

disclose the use, for the protection of the surface of a sparingly adhesive paint film, of the adhesive layer coated substrate sheets comprising the antioxidant IRGANOX 1010. This conclusion resulted from the fact that D2 failed to indicate the surface characteristics (easily or sparingly adhesive) of the resin paint films used, and because such characteristics could not be inferred with certainty from the generic chemical definition of the resins used, these characteristics varying according to the exact chemical constitution of the resin, and the generic definition allowing some freedom of choice as to the resin.

Concerning inventive step, the Opposition Division considered D4 as the closest prior art as it disclosed very similar sheets for the same purpose. In its opinion, the problem underlying the patent in suit, namely the provision of sheets that could also be used to protect sparingly adhesive films, was solved in an inventive manner by the incorporation of the specified high-polar additives.

The Opposition Division arrived at the same conclusion if D1/D2 was considered as the closest prior art. In its opinion starting from a comparative example and not following the compositional recommendations of the invention claimed by D1/D2 was not an appropriate manner for the assessment of inventive step, nor would it lead to the present invention.

Although the grounds of opposition pleaded by the Opponent did not comprise Article 100(b) EPC, the Opposition Division of its own volition considered the compliance of the claimed subject-matter with

Article 83 EPC, and arrived at the conclusion that these requirements were fulfilled.

- IV. On 21 April 2005 the Appellant (Opponent) lodged an appeal against the decision of the Opposition Division and paid the appeal fee on the same day.

In the Statement of Grounds of Appeal filed on 1 July 2005, the Appellant requested that the decision of the Opposition Division be set aside and the patent be revoked because the subject-matter of the claims lacked novelty and/or inventive step. Additionally, the Appellant requested the revocation of the patent also on the grounds of insufficient disclosure (Article 100(b) EPC). The Appellant further requested reimbursement of the appeal fee because of an alleged substantial procedural violation, namely that the Opposition Division did not allow the Appellant during the oral proceedings to comment on the grounds of Article 83 EPC.

- V. The Respondents (Patent Proprietors) presented their counterstatement in a written submission dated 21 November 2005. The Respondents disputed all the arguments submitted by the Appellant. They requested that the appeal be rejected and the patent be maintained as granted. They also filed an amended set of claims by way of an auxiliary request.

- VI. On 14 May 2007 the Board dispatched a summons to attend oral proceedings on 2 August 2007 and by a communication dated 4 June 2007 the Board summarised the case as it stood.

VII. The arguments presented by the Appellant in its written submissions and at the oral proceedings may be summarized as follows:

- The Appellant maintained that the claimed subject-matter lacked novelty having regard to the disclosure of D1/D2, essentially because the contact angle to the coated substrate, which was not explicitly disclosed in the document itself, could be calculated by extrapolation from the results in the Patentees' experimental report D7 to satisfy the claimed criterion. Additionally, the claimed subject-matter was considered by the Appellant as a non-novel selection from D1/D2's disclosure.

- The Appellant further argued that the claimed subject-matter was obvious over the disclosure of D1/D2, because finding out that the protective sheets described therein - which met all the compositional requirements of the claimed invention - provided good adhesion to a sparingly adhesive surface did not require inventive skill. The same conclusion would be arrived at when starting from D4 as closest prior art and by combining the teachings of D1/D2 and D4.

- The Appellant also contended that, in defiance of the requirement of the right to be heard under Article 113(1) EPC, the decision under appeal relied on arguments on which it had had no opportunity to comment with regard to the opposition ground under Article 100(b) EPC which, although not raised in the Notice of Opposition, had been introduced into the opposition proceedings by the Division itself.

VIII. The arguments of the Respondents may be summarised as follows:

- The Respondents argued that the claimed subject-matter was novel with respect to D1/D2 because this document failed to disclose the use of the protective sheets in relation to sparingly adhesive surfaces. This conclusion could be drawn even without reference to the experimental data in D7, which however clearly established that - because of the high adhesive force - the sheets of comparative example 1 were in contact with an easily, and not a sparingly, adhesive surface.
- The Respondents also submitted that the arguments concerning a selection invention were unfounded in view of the reliance of the Appellant on a comparative example as starting point.
- Concerning inventive step, they pointed out that since D1/D2 described only surface protective films for easily adhesive surfaces, the intention being to solve a different problem, the claimed subject-matter was inventive over this document. The same conclusion applied when starting from D4 as the closest prior art because this document failed to disclose the use of the specified high-polar additives for improving the adhesive force to sparingly adhesive paint surfaces.
- Concerning the issue of sufficiency of disclosure, the Respondents noted that the specification clearly indicated the rubber-based polymers to be used.

Since comparative example 1 of D1/D2 was designed to demonstrate poor results, its failure was inappropriate to show that the skilled person would not know how to achieve success when working within the ambit of the claimed invention.

- IX. The Appellant requested that the decision under appeal be set aside and that the European patent No. 0 707 053 be revoked in its entirety. Auxiliarily, it requested that the case be remitted to the first instance for further prosecution, and that the appeal fee be reimbursed because the Opposition Division committed a substantial procedural violation.

The Respondents requested that the appeal be dismissed and the patent be maintained as granted (main request), or that the European patent be maintained on the basis of Claims 1 to 6 of the auxiliary request filed with the letter dated 21 November 2005.

Reasons for the Decision

1. The appeal is admissible.

MAIN REQUEST

2. *Novelty (Article 54 EPC)*
- 2.1 Claim 1 of the patent is essentially directed to the use of a sheet for protecting a paint film wherein:

- (a) the paint film is a sparingly adhesive paint film having a contact angle of n-hexadecane to the paint film surface of at least 15°, and
- (b) the sheet comprises:
 - (b1) a supporting substrate having formed thereon a rubber-based pressure-sensitive adhesive layer comprising a rubber-based polymer having a low polarity and which does not contain unsaturated bonds or contains small amounts of unsaturated bonds, and
 - (b2) at least one high-polar additive having a molecular weight of at least 500 g/mol and a solubility parameter of at least 9.5 (cal/cm³)^{1/2}, selected from the group consisting of amines, hindered phenols and a mixture of both.

2.2 The novelty of this claim was contested by the Appellant having regard to document D2.

2.2.1 Document D2 discloses a surface protecting film comprising a base film of a polyolefin resin and a pressure-sensitive adhesive layer formed on one side of the base. According to Claim 1 the adhesive is a resin composition comprising 100 parts per weight of either ethylene/alpha-olefin copolymer or a propylene/alpha-olefin copolymer, 10 - 100 parts per weight of a tackifier resin and 5 - 50 parts per weight of a block copolymer represented by the formula A-B-A and/or A-B (wherein A is a styrene polymer block and B is a butadiene polymer block, an isoprene polymer block, or an olefin polymer block formed from either of these

blocks through hydrogenation). Such polymers are embraced by feature (b1) of Claim 1 of the patent in suit.

The films of D2 may also optionally include softeners, UV-absorbents, antioxidants, etc. (see [0021]). In the examples the antioxidant IRGANOX 1010, a high-polar additive falling within the definition of feature (b2) of Claim 1 of the patent in suit is used.

2.2.2 However, document D2 fails to disclose feature (a) of Claim 1 of the patent. The surfaces to be protected by the films of D2 are defined as metal plates or resin plates, especially steel plates which are to be coated and painted (see [0001]). Although the latter definition, if taken literally, does not say that the protective films should be brought into contact with the paint coating of the coated steel plate, it can be taken from paragraph [0007] that such embodiments are within the disclosure of D2.

Document D2 is, however, silent about the adhesive characteristics of the surface to be protected, that is to say, whether it is a sparingly adhesive surface, having a contact angle of n-hexadecane to the paint film of at least 15°, as required by Claim 1, or an easily adhesive surface having a lower contact angle.

2.2.3 The Board cannot accept the argument of the Appellant that this feature is implicitly disclosed in D2 because the nature of the coatings used in the patent in suit (polyester-melamine, melamine-alkyd, acryl-urethane, etc., see [0046] and [0057]) overlaps with the nature of the coatings mentioned in D2 (see [0007]).

As pointed out by the Opposition Division in its decision, the fact that coatings falling under the same compositional category are mentioned in the patent and in D2 is not sufficient to conclude that both surfaces exhibit the same surface properties. Within a single chemical class of coatings, the surface characteristics will vary depending on the exact nature of the resins and curing agents, the lacquer additives and the manner and degree of cross-linking of the actual coating composition used.

This finding is confirmed by comparing the experimental evidence D7 filed by the Patentees with the patent in suit. According to D7, a paint film (Adherend A) coated with Magicron TC-71 (the trade name of an acrylic resin-melamine curing organic solvent type clear coating, a product of Kansai Paint Co.) presents a contact angle of 11.7° . On the contrary, other acryl-melamine resins as used in the patent (see [0057]) present a higher contact angle with n-hexane of 15° .

- 2.2.4 Neither can the Board accept the argument of the Appellant that comparative example 1 of D2 is novelty destroying for the subject-matter of Claim 1, because the contact angle of the surface can be extrapolated from the information in D7.

The extrapolation made by the Appellant starts from the assumption that Adherend A of D7 and comparative example 1 in D2 have the same coating. However, the nature of the coating is not given in comparative example 1 of D2. Under these circumstances, the extrapolation made by the Appellant (independently of

the fact whether such extrapolation would be sensible or not) of the results in D7 cannot give any information about the nature of the surface properties of comparative example 1 of D2.

2.2.5 Finally, the Appellant argued that, taking into account the fact that no contact angle was mentioned in D2, the range now claimed should be regarded as a non-novel selection from the broad teaching of D2. This argument starts from a wrong assumption, namely that the fact that D2 is silent about the contact angle implies that the disclosure of D2 encompasses every contact angle. However, in the absence of any specific range of values in D2, there cannot be any "selection". For this reason alone the claimed subject-matter cannot be considered a "non-novel selection". Furthermore, it is also the case that the other criteria for a selection invention set out in T 279/89 (not published in the OJ) do not apply and/or are not met in the circumstances (these criteria being: that (i) the selected sub-range should be narrow; (ii) the selected sub-range should be sufficiently far removed from the known range illustrated by means of examples; (iii) the selected area should not provide an arbitrary specimen from the prior art, i.e. not a mere embodiment of the prior description, but another invention (purposive selection)).

2.3 The subject-matter of Claim 1 of the main request is for these reasons novel (Article 54 EPC).

3. *Inventive step (Article 56 EPC)*

3.1 Closest prior art

- 3.1.1 The patent relates to the use of a paint film-protective sheet which can adhere well to a paint film which is liable to cause a poor adhesion.

The Board agrees with the finding in the appealed decision that D4, which relates also to paint film protective sheets having deposited on one side thereof a rubber-based pressure sensitive adhesive (see Claim 1), represents the closest prior art.

- 3.1.2 According to the description of the patent in suit, the sheets disclosed in D4, when used for protecting sparingly adhesive paint films (those having a contact angle of n-hexadecane to the paint film surface of at least 15°), show some drawbacks such as poor initial adhesion or a reduction in the adhesive force with the passage of time, this reduced adhesion probably being caused by the bleeding of unreacted low molecular weight components from the paint film (see [0005] - [0006]).

3.2 Problem to be solved and its solution

- 3.2.1 The technical problem underlying the patent vis-à-vis D4 can be seen in the provision of protective sheets showing improved adhesive force when applied to sparingly adhesive films.

- 3.2.2 This technical problem is solved by the use of the sheets according to Claim 1 of the patent in suit, which include as a further component a high-polar additive having a molecular weight of at least 500 g/mol and a solubility parameter of at least 9.5

(cal/cm³)^{1/2}, selected from amines, hindered phenols and mixtures of both (Claim 1, feature (b2)).

3.2.3 The results of the examples and comparative examples show that this problem has been credibly solved. The sheets according to the patent including a high-polar additive exhibit increased adhesive force to sparingly adhesive films, when compared with sheets according to D4 without such additives (see examples 1 - 10 vs. comparative examples 1 and 3). Moreover, the addition of other high-polar additives, which do not fulfil the requirements of Claim 1, does not give any improvement of the adhesive force. (cf. comparative examples 2 and 4 using bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate, a compound having a solubility parameter of 9.6 and a molecular weight of 481)(cf. Tables 1 and 2). This finding was not contested by the Appellant.

3.3 Obviousness

3.3.1 It remains to be decided whether, in view of the available prior art documents, it would have been obvious for the skilled person to solve this technical problem by the means claimed, namely by incorporating specific high-polar additives (Claim 1, feature (b2)).

3.3.2 Document D4 cannot give any hint as to the possible use of amines and/or hindered phenols for improving the adhesive force to sparingly adhesive paint films because these compounds are not mentioned at all.

The Appellant pointed out that D4 discloses the possible use of alkylphenol resins as tackifiers, i.e. ingredients to improve adhesion (see page 3, line 51),

and that the skilled person would have considered these as suitable high-polar additives because of the exemplification according to Claim 5 of the patent in suit of an alkylphenol resin as an "inventive" high-polar additive. It is however noted by the Board that the reference in Claim 5 to alkylphenol resins is to be read in the context of Claim 1, according to which a phenol compound fitting the description of a "high-polar additive" must be hindered, i.e. must carry on the phenol nucleus a sterically hindering group, e.g. an alkyl group R as illustrated by formula (E) on page 5 of the patent specification. D4 does not, however, disclose such species and cannot therefore suggest their use for the desired adhesion improvement to sparingly adhesive surfaces.

3.3.3 While document D2 exemplifies the incorporation of the hindered phenol antioxidant IRGANOX 1010 into the pressure sensitive adhesive coating of sheets used for the protection of coated steel plates (see above 2.2.1 and 2.2.2), it fails to recognize that this antioxidant would also fulfil the function of improving the adhesive force of the adhesive coating to sparingly adhesive paint films, which is at the core of the present use-invention.

The Board also disagrees with the Appellant's assumption that comparative example 1 of D2 suggests the use of IRGANOX 1010 for achieving this effect because this example exhibits the highest adhesive force of all examples (see Table 1 of D2). In the Board's judgment, this argument is manifestly unconvincing when considering that e.g. the sheets according to example 1 using the same amount of the

same antioxidant achieve a considerably lower adhesive force.

3.3.4 In summary, the available prior art gives no clue as to the possible use of some compounds known to be antioxidants or UV absorbents as additives to rubber-based polymers in order to improve their adhesive force to sparingly adhesive paint films.

3.3.5 For these reasons the subject-matter of Claim 1 involves an inventive step within the meaning of Article 56 EPC.

4. *Right to be heard (Article 113(1) EPC)*

4.1 The Appellant contended that in the present case its right to be heard as stipulated in Article 113(1) EPC had not been respected, in that it had not been allowed to argue the ground of opposition under Article 100(b) EPC (Article 83 EPC, sufficiency of disclosure) at the oral proceedings before the Opposition Division held on 3 February 2005.

4.2 Although the Appellant in its Notice of Opposition based its opposition only on the grounds of Article 100(a) EPC, the Opposition Division itself introduced as a further ground for opposition the issue whether the patent met the requirements of Article 83 EPC (see point IV of the summons to attend the oral proceedings pursuant Rule 71(1) EPC dated 12 August 2004).

4.3 According to point 2 of the minutes of the oral proceedings the Chairman of the Opposition Division

stated at the beginning of the proceedings that no discussion of the ground of opposition according to Article 100(b) EPC would take place during those proceedings, because this opposition ground had not been sufficiently substantiated by the Opponent.

- 4.4 The Board considers that this course of action of the Opposition Division, denying the Opponent (now Appellant) the opportunity during the oral proceedings to comment on a ground of opposition, albeit brought into the case by the Opposition Division itself, constitutes a substantial procedural violation (Article 113(1) EPC).

The fact that the Appellant did not avail itself of the opportunity to file written arguments in response to the summons to attend the oral proceedings did not deprive it of its right to be heard. The Appellant was entitled to expect that it would still have an opportunity to comment on this new ground during the oral proceedings, because a decision of the European Patent Office may only be based on grounds on which the parties have had an opportunity to present their comments, thus ensuring that proceedings before the EPO are conducted in a fair manner.

5. *Remittal (Article 111(1))*

- 5.1 The Board had then to consider whether to remit the case or not to the Opposition Division for further prosecution, as requested by the Appellant.

- 5.2 Although according to Article 10 of the RPBoA a Board should usually remit a case to the Division at first

instance if a fundamental deficiency arises, remittal is not an automatic consequence and if special circumstances exist the Board may decide otherwise.

In the present case, the Board considers that remittal is not appropriate, essentially because (i) the arguments of the Appellant concerning Article 100(b) EPC, which are in essence based on a comparison of example 5 of the patent with comparative example B of D7, were taken into account in the decision under appeal (see page 5, point IV) by the Opposition Division on its own motion (these arguments *de facto* being those produced by the Opposition Division itself when introducing this new ground with its communication of 12 August 2004), (ii) the Appellant in the meantime has had the opportunity, and indeed availed itself of it, to expand its argumentation in this respect before the Board, and (iii) no concrete reason was given by the Appellant for the necessity for remittal (e.g. no intention was declared for the production of further evidence which would need more time for preparation). In the circumstances a remittal to the Opposition Division would only unnecessarily delay the proceedings.

- 5.3 Accordingly, the Board decides not to remit the present case to the Opposition Division for further consideration of Article 100(b) EPC, but to decide the case itself under Article 111(1) EPC.

6. *Sufficiency of disclosure (Article 83 EPC)*

6.1 It is undisputed that the patent indicates in the examples at least one way to carry out the invention. It is thus to be decided if the disclosure allows the invention to be performed in the whole area claimed without undue burden, applying common general knowledge.

6.2 The paint film-protective sheet used in the invention comprises a supporting substrate having formed thereon a rubber-based adhesive layer containing a specific high-polar additive. The specification clearly specifies the nature of the supporting substrate (see [0018]), the rubber-based polymer (see [0019] - [0021]) and the specific high-polar additives (see [0023] - [0037]). The specification includes several examples using different rubber-based polymers and different high-polar additives so that in principle it could be assumed that the disclosure allows the invention to perform in the whole range claimed.

6.3 However, the Appellant has pointed out that the adhesive sheet prepared by the Respondents reproducing the teaching of comparative example 1 of D2 did not perform well when applied to a paint film having a contact angle of 22.9 (cf. D7, Adherend B), although it was very similar to the sheet of example 5 of the patent in suit. The Appellant concluded that, taking account of the fact that this composition represents an embodiment of Claim 1 and that it failed to show sufficient adhesive force, there was an undue burden on the skilled person to turn this failure into success because the claimed subject-matter embraced a huge number of possible compositional variations but failed

to indicate the concrete measures to be taken in order to achieve the desired adhesive force to sparingly adhesive paint films.

- 6.4 The Board finds this argument unconvincing. It is noted that the sheet of D7 differs from the sheet of example 5 of the patent by using a different hydrogenated resin and a different high-polar additive. Moreover the amounts of these components used are also different and in particular only half of the amount of the high-polar additive has been used in the example of D7 compared with example 5 of the patent. In view of these differences there is indeed no contradiction in the results of example 5 and D7, i.e. D7 does not disprove the beneficial results exhibited by "inventive" example 5.

Furthermore, taking account the fact that the gist of the present invention is precisely the use of specific high-polar additives to improve adhesion, it would be evident to the skilled person that, in order to achieve the desired adhesion, the amount of this additive is the most relevant feature and that too small an amount would result in poor adhesion. It would then *prima facie* be clear to the skilled person that in the case of a failure with low amounts of such polar additives the amount should be increased. This finding is confirmed by the specification which states that if the amount of high-polar adhesive is very low the "addition effect" is poor (see [0039]).

For these reasons and in the absence of pertinent contrary evidence the Board considers that the skilled person would know how to modify the sheets of D7 in

order to obtain a sheet with the desired good adhesion without undue burden. The requirements of Article 83 EPC are therefore deemed to be fulfilled.

7. *Reimbursement of appeal fees (Rule 67 EPC)*

7.1 Rule 67 EPC stipulates that reimbursement of appeal fees shall be ordered *inter alia* where the Board deems an appeal to be allowable, if such reimbursement is equitable by reason of a substantial procedural violation.

7.2 Since the appeal is not allowable, the Appellant's request for reimbursement of the appeal fees must be rejected.

8. As the main request of the Respondents is allowed, there is no need for the Board to deal with the auxiliary request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

G. Röhn

P. Kitzmantel