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Datasheet for the decision of 27 June 2014

Case Number: T 2535/11 - 3.3.09

Application Number: 02752879.3

Publication Number: 1381654

IPC: C09J7/02, G09F3/10

Language of the proceedings: EN

Title of invention:
LABELS

Patent Proprietor:
Innovia Films Limited

Opponent:
Treofan Germany GmbH & Co.KG

Headword:

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
Novelty - (yes)
Inventive step - (yes)

Decisions cited:

Catchword:

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Case Number: T 2535/11 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 27 June 2014

Appellant: (Opponent)	Treofan Germany GmbH & Co.KG Am Prime Parc 17 65479 Raunheim (DE)
Representative:	Mai, Peter M. Mai, Dörr, Besier Patentanwälte Steuerberater/Wirtschaftsprüfer Kreuzberger 64 65205 Wiesbaden (DE)
Respondent: (Patent Proprietor)	Innovia Films Limited Station Road Wigton Cumbria CA7 9BG (GB)
Representative:	Brand, Thomas Louis WP Thompson Coopers Building Church Street Liverpool L1 3AB (GB)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 26 August 2011 rejecting the opposition filed against European patent No. 1381654 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	W. Sieber
Members:	W. Ehrenreich
	K. Garnett

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 1 381 654 in the name of UCB, SA, now Innovia Films Limited, was announced on 26 October 2005 in Bulletin 2005/43.

II. The patent was granted with 15 claims, claims 1 and 11 reading as follows:

"1. A label comprising a self supporting sheet of a biopolymer, said sheet being substantially transparent to visible light when uncoated characterised in that the sheet comprises:

(a) a first coating on at least one surface thereof to aid printability thereon;
(b) a second coating comprising an adhesive dispersible in an aqueous medium; and
(c) optionally a third coating to modify water permeability through the sheet."

"11. A method for preparing and/or applying a label, the method comprising the steps of

(a) coating a biopolymeric sheet on at least one surface thereof with an aqueous composition with an adhesive dispersed therein;
(b) treating at least the opposite surface of the sheet, optionally both surfaces, to improve its printability,
(c) drying the film to remove excess water;
(d) applying the label to an article; and
(e) optionally drying the article to affix the label thereon."

Claims 2 to 10 are either directly or indirectly dependent on claim 1; claim 12 is dependent on claim 11.
Claim 13 and dependent claim 14 relate to (i) an article prepared by a method as described in either claim 11 or 12 and/or (ii) an article comprising the label as claimed in any of claims 1 to 10. Claim 15 relates to a label facestock comprising a label as claimed in any of claims 1 to 10.

III. Opposition against the patent was filed by

Treofan Germany GmbH & Co. KG on 26 July 2006.

The opponent requested revocation of the patent in its entirety on the grounds that the claimed subject-matter was neither novel nor inventive (Article 100(a) EPC).

The documents submitted in the opposition proceedings were:

D1 WO 00/62273 A1
D2 WO 99/19412 A1
D3 US 5 489 474 A
D4 EP 1 000 991 A1.

IV. With its decision issued in writing on 26 August 2011 the opposition division rejected the opposition.

As regards novelty the opposition division held that D3 failed to disclose a coating or treatment step which aided the printability of the polylactic acid film disclosed therein.

D1 was considered to be the closest prior art for the assessment of inventive step. The opposition division

saw the difference of the label described in D1 to the label claimed in the patent in suit as being in the use of PVC and PET as label sheet instead of a biopolymer, and defined the objective technical problem to be solved by the claimed invention as the provision of a sustainable adhesive label with improved biodegradability and reduced drying time upon application. In its view the prior art on file failed to mention the use of biopolymeric films as being suitable for serving as substrate for labels. Considering further that biopolymeric films such as polylactic acid (PLA) were structurally quite different from PVC and PET it was doubtful whether a skilled person would replace the latter by the former without having any incentive to do so. Moreover, D3 and D4 were not related to label applications and were entirely silent with regard to the technical field and the problems underlying Dl. The skilled person would therefore not combine the teaching of these documents with that of Dl, and would in particular not select the polylactic acid film as an isolated feature from the teaching of D3 or D4 without knowing that this film would provide the same advantages as required for the films disclosed in Dl.

Consequently, inventive step was acknowledged in view of Dl, either alone or combined with the teaching of D3 or D4.

The opposition division also held that the same considerations applied when taking D2 as the closest prior art.

V. On 4 November 2011, the opponent (in the following: the appellant) filed an appeal and, on the same day, paid the prescribed fee. The statement setting out the

grounds of appeal was filed on 30 December 2011 together with further documents, including:

D5 WO 97/00298 A1
D6 US 4 675 351 A
D7 US 5 455 066 A.

VI. A response was filed by the proprietor (in the following: the respondent) with its letter of 25 April 2012.

VII. By its letter of 8 June 2012, the appellant filed further documents.

VIII. On 22 November 2013, the board summoned the parties to oral proceedings and issued its preliminary opinion.

The board observed that, in its preliminary view, the claimed subject-matter was novel. D3 nowhere disclosed a first coating (a) that improved the printability of the lactic acid base polymer film. There was also no evidence that any of the specific materials used in D3 for a coating inherently had this property. Furthermore, D3 nowhere disclosed any treatment step to improve the printability of the lactic acid base polymer as required in step (b) of claim 11.

As to inventive step the question was raised as to whether D3 or D1 represented the closest prior art.

IX. With letter of 2 June 2014, the appellant withdrew its request for oral proceedings and announced that it would not attend the oral proceedings in the event that these should take place.

X. On 27 June 2014 the oral proceedings took place in the absence of the appellant.

XI. So far as relevant to the present decision, the arguments of the parties can be summarized as follows.

XII. Arguments provided in writing by the appellant

Novelty

D3 describes adhesive films comprising a transparent sheet of polylactic acid (PLA), i.e. a biopolymer, which bears a layer of an adhesive which is dispersible in an aqueous medium (see the abstract, in conjunction with column 4 lines 43 to 47). This disclosure anticipates features (a) and (b) of claim 1, because any adhesive inherently leads to a better adhesion to colouring agents and thus to an improved printability (first full paragraph on page 4 of the statement of grounds of appeal). In addition to the adhesive layer a further layer can be present (column 3, lines 13 to 20). A print is described in column 4, lines 6 to 10. This constitutes a further disclosure in D3 which anticipates the first coating of claim 1.
In context it was pointed out that "printability" as mentioned in feature (a) of claim 1 is an inherent property of each coating, irrespective of whether or not printability of the coating is explicitly mentioned.

The respondent's argument, that process claim 11 does not explicitly mention a coating but rather requires a treatment of one surface of the sheet, was wrong. The possibility of a surface-treatment is explicitly disclosed in D3 as a facultative measure (column 12,

lines 11 to 15) and is thus one option for a skilled person.

Also the term "label" used in the claims of the opposed patent is not a distinguishing feature over the adhesive films disclosed in D3, because the films in D3, including the adhesive layer, have a thickness of 100 µm to 120 µm, which is smaller than the labels of the patent in suit, which can have thicknesses up to about 2 mm.

Thus, the subject-matter of claims 1 and 11, as well as the article of claim 13 and the label facestock of claim 15 including the label of claim 1 are all not novel over D3.

D5 discloses an adhesive system, based *inter alia* on an adhesive dispersible in an aqueous medium, for adhering labels to bodies. The labels can be made of hydrophobized paper, which is composed of a biopolymer selected from cellulose or polylactic acid. The coating of the labels with the adhesive inevitably leads to an improved printability.
An aqueous-dispersible adhesive system for applying paper labels to bottles is also disclosed in D6 and D7.

By the same token, D5 to D7 anticipate the claimed subject-matter.

Inventive step

D1 or D2 can be taken as the closest prior art for the assessment of inventive step.

D1 discloses a transparent adhesive label for the application to containers by means of an aqueous-

dispersible adhesive. In one embodiment the label has a "no-label" look. Figure 1a of D1 shows an embodiment wherein a print is applied to the label via an adhesion promoter. The claimed label differs therefrom only in that the self supporting sheet is a biopolymer (eg PLA) instead of a synthetic polymer, such as PET or PVC, which, however, are only mentioned as preferred. On the other hand, the use of highly shrinkable sheets is simultaneously recommended.

It is, however common general knowledge that polylactic acid (PLA) films have high shrink. Therefore, it would have been obvious for a skilled person to replace the synthetic polymer films mentioned in D1 by PLA in order to achieve the good shrink properties. The claimed subject-matter is therefore obvious from D1 alone.

Likewise, D2 describes transparent printable labels with a "no-label" look bearing a water-based adhesive layer. It is mentioned that the use of hydrophilic base layers positively influences the drying of water-based adhesive layers. The claimed label differs therefrom solely in that a biopolymer is not mentioned as a base for the self-supporting sheet.

It is, however, known that PLA is a hydrophilic biopolymer. Therefore it would have been obvious for a skilled person to chose PLA in order to put the teaching of D2 into practice. D2 therefore also renders the claimed subject-matter obvious.

The skilled person learns from D3 that PLA films are suitable materials for adhesive labels. D3 explicitly mentions that adhesive-coated PLA films are environmentally compatible. Thus, a skilled person would have been pointed in the direction of combining

the advantages of D1 with the environmental advantages of D3. The claimed subject-matter was thus also obvious from a combination of D1 with D3.

In a similar manner, the skilled person learns from D4 that PLA films are suitable for adhesive coatings. Thus, a combination of D1 with D4 also renders the claimed subject-matter obvious.

XIII. Arguments provided in writing and orally by the respondent

Novelty

There is no disclosure in D3 of a coating to aid printability, ie featue (a) of claim 1. In this context it should be noted that not every coating or treatment would be considered by a skilled person as aiding printability.

Further, D3 neither discloses labels nor is the preparation of labels mentioned. The adhesive display films mentioned in D3 are adhered onto a signboard or building walls by way of an adhesive layer to carry out notification, indication, advertisement or propagation (column 11, lines 53 to 56). Adhesive films, and in particular adhesive display films, are a broad product group, which includes labels, but are not equivalent to labels.

D5 to D7 disclose arrangements having a paper substrate. A paper is, however, not a transparent sheet.

The claimed subject-matter is therefore novel over D3 and D5 to D7.

Inventive step

Either D1 or D2 can be considered to represent the closest prior art. The claimed subject-matter essentially differs from the labels described in these documents by the use of biopolymer substrate instead of a synthetic polymer. The use of such a biopolymer substrate imparts the technical effect that the label can be used as a durable, substantially transparent wet-glue label that can be applied with well known labelling equipment and which will dry in situ in a reasonable time (paragraphs [0018] and [0054] of the patent specification).

There is nothing in the prior art which would prompt the skilled person to look to biopolymers, let alone PLA, from among the vast number of polymers known in the prior art in order to achieve a quicker drying time for labels. Because D3 and D4 are unrelated to labels, and do not teach that PLA films are suitable substrates for label production, the skilled person would not have been prompted to combine these documents with either D1 or D2 in order to arrive at the claimed invention.

XIV. The appellant requested in writing that the appealed decision be set aside and the patent be revoked.

XV. The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. Novelty

Novelty was attacked by the appellant on the basis of documents D3, and D5 to D7.

2.1 Novelty in view of D3

2.1.1 D3 discloses a degradable adhesive film having an adhesive layer on the surface of a substrate film comprised of a lactic acid base polymer. The degradable product maintains the essential mechanical properties of the lactic acid base polymer during the period of use and will degrade after use on the basis of the essential hydrolytic properties. It is thus useful for a "material of throwaway formed products which are mainly used outdoors" (column 4, lines 20 to 25). One specific application of D3 is a degradable adhesive display film comprising a letter, drawing, stamp or mark which is "described" by printing or painting the degradable film (column 3, lines 30-34). The lactic acid base film is transparent (column 5, lines 13-27, and column 15, line 33). The adhesive is eg an aqueous emulsion-based adhesive containing fine particles dispersed in water (column 9, lines 45-47). Printing and painting can be carried out by using a coating compound, dye, ink, pigment, Japanese ink, and other known colourants. Colourants which may be used include offset printing ink, rotogravure ink, Japanese ink, paint, UV ink, heat set ink and cinnabar seal ink (column 11, lines 61-67).

The degradable adhesive display film is prepared by printing or painting the surface of the lactic acid base polymer film and by successively coating an adhesive on the other side of said film. The film thus comprises

(a) a coating or printing on one side and

(b) an adhesive layer on the other side of the substrate film (column 3, lines 34-39).

In examples 23 - 31, lactic acid base polymer films are printed on one surface with an offset printing machine by using the ink "BEST-ONE-PROCESS-BLACK-H" and coated on the other side with an aqueous adhesive emulsion formulation. The same process is carried out in examples 32 and 33, the ink being in this case a two-component type ink for polyethylene terephthalate and a single-component type ink for polystyrene.

The thickness of the lactic acid base substrate film is in the range of 10 - 2000 microns (column 8, lines 63 to 65). As was not disputed by the appellant, the lacticacid base substrate film can therefore be considered to be self supporting.

2.1.2 First of all, D3 does not disclose a label. All that D3 discloses in this respect is (a) "a polylactic acid based degradable adhesive film for display which is printed or coated on the surface" (column 1, lines 19 to 21), (b) "a degradable adhesive film for use in ... display" (column 3, lines 5 to 6), (c) "a degradable adhesive display film" (column 3, lines 29 to 30) and (d) a "degradable adhesive display film which was printed or painted" and which "is adhered on a signboard or a building wall by way of the adhesive layer to carry out notification, indication, advertisement and propagation" (column 11, lines 53 to 56).

However, not every adhesive display film, let alone every adhesive film, would be considered by one skilled in the art as a label. The term "adhesive display film"

stands for a broader group of products, which group includes labels but is not equivalent to "label". This is corroborated by the only explicit application mentioned in D3, namely to adhere the printed adhesive display film on a signboard or a building wall. The person skilled in the art would never associate such an application with a label. Therefore, the feature "label" present in all independent claims of the opposed patent distinguishes the claimed subject-matter over D3.

2.1.3 Secondly, D3 does not disclose a first coating that "aids printability" of the lactic acid based polymer. The appellant's assertion in this context was that any adhesive layer would inherently have this property and therefore simultaneously fulfil requirements (a) and (b) of claim 1. However, as pointed out by the respondent no evidence has been provided that any adhesive inherently has the property that it aids printability. There is also no evidence that any of the specific printing materials used in the examples of D3 inherently provides this property. Consequently, the label of claim 1 differs from the films disclosed in D3 also in terms of the first coating (a).

Further, D3 nowhere discloses any treatment step to improve the printability of the lactic acid based polymer. Consequently the process of claim 11 differs from D3 in terms of this treatment step (b).

2.2 Novelty in view of D5 to D7

2.2.1 D5 discloses the use of a particular aqueous adhesive for gluing all-around labels made of thermoplastics, such as polyethylene, polypropylene, polystyrene, polyvinylchloride, "Zellglas", oriented polypropylene,

and hydrophobized papers, such as siliconized or coated papers (second paragraph on page 2 and penultimate paragraph on page 6).

The only biopolymer of the examples listed in D5 is paper.

The appellant argues that any material, in particular thin foils, have some transparency to visible light (first full paragraph on page 3 of the statement of grounds of appeal). In the board's judgment, however, the skilled person would not consider that opaque sheets, such as sheets of paper, are substantially transparent. Furthermore, D5 does not disclose (a) a first coating that aids printability as required by claim 1 of the patent or (b) any treatment step to improve printability as required by claim 11 of the patent. The appellant's argument that any adhesive inherently leads to a better adhesion to colouring agents and thus to an improved printability (first full paragraph on page 4 of the statement of grounds of appeal) is not accepted, since it is a mere assertion for which there is no evidence.

The subject-matter of claims 1 and 11, and by the same token of all remaining claims, is therefore novel over D5.

2.2.2 D6 and D7 disclose specific adhesives to adhere labels to e.g. bottles. The labels themselves are not described in detail; reference is made only in very general terms to paper (column 8, line 35 and claims 1 to 3 of D6 and column 1, line 23 of D7). Furthermore, the presence of a coating that "aids printability" or of a treatment that improves printability is not disclosed either. Hence, the same distinguishing

features are present as discussed above with regard to D5, namely, the feature of substantial transparency and of (a) a first coating to aid printability and (b) a treatment to improve printability. For the same reasons as given above with regard to D5, novelty can therefore be acknowledged with regard to both D6 and D7.

2.3 In summary, the subject-matter of claims 1 and 11, and by the same token the subject-matter of the remaining claims, all of which directly or indirectly depend on claims 1 or 11, is therefore novel over D3, and D5 to D7.

3. Inventive step

3.1 The invention underlying the patent concerns labels which have a so-called "no-label" look. These are labels which, apart from the printed matter, are transparent (or have the same colour as the object on which the label is fixed) such that the printed matter appears to be part of the object as if no label were present. The problem to be solved by the invention can be taken as the provision of a label that can be applied with known labelling equipment that is used to apply paper wet-glue labels and which can dry in situ in a reasonable time without the need to use exotic coatings and yet retains the advantages associated with polymeric film labels (paragraph [0018] of the patent specification).

3.2 As set out above, the display films described in D3 cannot be considered to be labels, but are rather films that are adhered onto signboards or building walls (column 11, lines 53 to 55). Furthermore, D3 relates to products which are mainly used outdoors and degrade and disappear in a natural environment after use.

Hence, both the technical field and the problem to be solved by D3 and the opposed patent are different. Therefore, D3 cannot be considered to represent the closest prior art.

3.3 Unlike D3, and in the same way as the product of the opposed patent, D1 is concerned with labels having a no-label look (page 3, lines 26 to 27 and page 6, line 10). Therefore, as acknowledged by both parties and the opposition division, D1 can be considered to represent the closest prior art.

D1 relates to easily removable labels comprising a sheet of a polymer such as polyethylene terephthalate or polyvinyl chloride, polyesters, polyolefins, and polyvinylacetate or cycloolefine copolymers (page 7, lines 27 to 28 and page 12, lines 1 to 4). The sheet is coated with an adhesive, eg an adhesive dispersible in an aqueous medium (page 6, lines 1 to 13), corresponding to the second coating (b) of claim 1. The sheet can further comprise (i) a layer formed by corona treatment, plasma treatment or chemical grafting or (ii) an adhesion promoting layer (page 8, lines 1 to 4 and page 10, line 28 to page 11, line 2), corresponding to the first coating (a) of claim 1 or the treatment step (b) of claim 11 8in case of corona treatment). Thus, the subject-matter of all claims differs from D1 in that the sheet of which the label is composed is made of a biopolymer rather than the synthetic polymers as disclosed in Dl.

3.4 The problem addressed in the opposed patent is the provision of a label that can dry in situ in a reasonable time without the need to use exotic coatings, yet retains the advantages associated with

the labels made of polymeric films, such as transparency to achieve a no-label-look (page 3, lines 16 to 20).

3.5 As a solution to this problem, the patent proposes a label (independent claim 1), a method for preparing a label (independent claim 11) and an article comprising the label (independent claims 13 and 15), characterised in that the label comprises a self supporting sheet of a biopolymer rather than the synthetic polymers of D1.

3.5.1 The opposed patent (page 6, lines 3 to 4) states that due to the permeability of biopolymers, especially cellulose, the adhesive can dry within a reasonable time, similar to the case of paper. This appears to indicate that the above problem is indeed solved.

The appellant argued that even though it was true that polylactic acid was more permeable to water, this would not mean that biopolymers dried quicker than other thermoplastic materials. More specifically, biopolymers had more polar groups and thus a higher affinity to polar substances such as water compared to the thermoplastic polymers as disclosed in D1. Therefore the water molecules were more strongly bound by biopolymers and drying was more difficult. This argument is not convincing in view of the fact that the thermoplastic polymers of D1 are impermeable to water and hence prevent drying because the water located underneath a film made of these polymers cannot penetrate through the film. Thus evaporation and therefore drying is not possible. This is confirmed by D1 itself which states that thermoplastic films such as films of polyolefins, polycarbonates, polyesters, polyvinyl chloride, polystyrene, etc., prevent access of washing liquid (1 to 2% sodium hydroxide in water,

see page 5, lines 5 to 11 of D1) to the adhesive underneath these films. If water present on the outer side of these films cannot penetrate through the films, the same must hold true for water located underneath the films as part of the adhesive, namely that it cannot penetrate through the film such that it evaporates and drying takes place.

3.5.2 The objective technical problem solved in view of D1 thus appears to be that addressed in the patent, namely the provision of a label that can dry in situ in a reasonable time without the need to use exotic coatings, yet retains the advantages associated with the labels made of polymeric films, such as transparency to achieve a no-label-look.

3.6 The solution chosen in the claims is not obvious in view of D1 itself. In particular, this document does not contain any indication that drying times can be reduced if the label is composed of biopolymers. The same applies to D3 and D4, which do not contain any suggestion as to drying times in relation to biopolymers. Therefore, inventive step for the claimed subject-matter is acknowledged in view of D1 alone, as well as in combination with any of D3 or D4.

3.7 In the same way as in the opposed patent, D2 refers to polymeric labels that can have a no-label look (page 11, line 31). Therefore, as acknowledged by both parties and the opposition division, also D2 can be considered to represent the closest prior art.

D2 discloses labels composed of a polymer sheet having a water-based adhesive coating and a hydrophilic coating (page 7, lines 25 to 35, page 12, lines 30 to 31 and page 13, lines 20 to 21). In addition, an

adhesion promoting tie layer or primer may be present (page 14, lines 27 to 34). The only examples given for the polymer sheet are polypropylene, high density polyethylene, and polyester (PET) (page 16, lines 12 to 14). Therefore, in the same way as in D1, and as acknowledged by both parties, a biopolymer sheet is not disclosed in D2. (In this context it may be noted that the hydroxyethylcellulose "HEC" in the examples of D2 is not present as a sheet but only as hydrophilic coating; see page 16, lines 16 to 17 in conjunction with page 17, lines 1 to 2).

Therefore, the same reasoning as set out above with regard to inventive step in view of D1 applies to inventive step in view of D2.

4. For the above reasons, the subject-matter of claims 1 and 11 as granted, and by the same token the subject-matter of the remaining claims, all of which directly or indirectly depend on claims 1 or 11, is novel and are based on an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Cañueto Carbajo W. Sieber

Decision electronically authenticated