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**Datasheet for the decision
of 4 April 2019**

Case Number: T 1532/16 - 3.3.03

Application Number: 01922824.6

Publication Number: 1311582

IPC: C08K3/08

Language of the proceedings: EN

Title of invention:

BIODEGRADABLE POLYMER FILMS AND SHEETS SUITABLE FOR USE AS
LAMINATE COATINGS AS WELL AS WRAPS AND OTHER PACKAGING
MATERIALS

Patent Proprietor:

bio-tec Biologische Naturverpackungen GmbH & Co.
KG

Opponent:

Pistor, Wolfgang

Relevant legal provisions:

EPC Art. 54(2), 54(3), 56, 123(2)

EPC R. 99(2)

RPBA Art. 12(2), 13(1), 13(3)

Keyword:

Admissibility of appeal - (yes)
Late-filed objection - amendments to case
Late-filed objection - after arrangement of oral proceedings
(yes)
Late-filed objection - adjournment of oral proceedings would
have been required (yes)
Late-filed objection - admitted (no)
Amendments - added subject-matter (no)
Disclaimer type formulation - without effect - disclosure of
interfering document not novelty destroying
Novelty - (yes)
Inventive step - (yes)

Decisions cited:

G 0003/14, G 0001/03, G 0002/03



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Case Number: T 1532/16 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 4 April 2019

Appellant: bio-tec Biologische Naturverpackungen GmbH & Co.
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Appellant: Pistor, Wolfgang
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
28 April 2016 concerning maintenance of the
European Patent No. 1311582 in amended form.**

Composition of the Board:

Chairman D. Semino
Members: M. C. Gordon
C. Brandt

Summary of Facts and Submissions

- I. The appeal lies from the interlocutory decision of the opposition division posted on 28 April 2016 according to which it was held that European Patent number 1 311 582 could be maintained in amended form on the basis of the first auxiliary request, filed during the oral proceedings on 9 March 2016.
- II. In the application as filed claim 1 read as follows:
1. **A biodegradable polymer blend comprising:**
 - at least one stiff synthetic biodegradable polymer having a glass transition temperature greater than about 10° C.; and**
 - at least one soft biodegradable polymer having a glass transition temperature less than about 0° C.,**
 - wherein the polymer blend is suitable for formation into at least one of extruded sheets and blown films.**

The patent was granted with a set of 23 claims, whereby claim 1 read as follows, the disclaimer having been introduced in respect of two examples of the document WO-A-02/14430 (designated D5 during examination proceedings):

1. A biodegradable polymer blend comprising:

at least one stiff synthetic biodegradable polymer having a glass transition temperature greater than 10° C and included in an amount of 50-98% by combined weight of the stiff and soft biodegradable polymers; and at least one soft synthetic biodegradable polymer having a glass transition temperature less than -10° C, comprising an aliphatic-aromatic copolyester, and included in an amount of 2-50% by combined weight of the stiff and soft biodegradable polymers; and wherein the polymer blend is suitable for extrusion or blowing into at least sheets and films provided that the following polymer blends 1 and 2 are excluded:

Polymer Blend	1	2
Composition [%]		
PLA	49,8	29,84
Terephthalic acid-butanediol-adipic acid-copolyester (Ecoflex®)	49,8	34,84
Poly(butylene)succinate or Poly(butylene)succinate/adipate (Biomax 6929®)	-	34,84
Polyolester (Slipping agent)	0,4	0,48
Compounding		
T [°C]	180	200
Compounding		
MFI [g/10min] 190°C, 2,16 kg	9,1	5,11
Granulate		
Gra H ₂ O [%]		0,11

III. A notice of opposition against the patent was filed in which revocation of the patent on the grounds of Article 100(a) EPC (lack of novelty, lack of inventive step), Article 100(b) EPC and Article 100(c) EPC was requested.

IV. The decision of the opposition division was based on the claims of the patent as granted as main request and an amended set of claims as first auxiliary request. Claim 1 of the first auxiliary request differed from claim 1 of the patent as granted by amendment of the minimum glass transition temperature of the stiff polymer from 10°C to 40°C, by insertion of the following wording at the end of line 6 of the claim: "[...combined weight of the stiff and soft biodegradable polymers;] wherein the biodegradable polymer blend further comprises at least one type of organic filler particles [and wherein the polymer blend

is suitable...]"
and by deletion of the disclaimer.

According to the decision, the main request (claims as granted) did not meet the requirements of Article 123(2) EPC due to the disclaimer, reference being made to the requirements set out in G 1/03 and G 2/03 for "undisclosed disclaimers" (OJ EPO 2004, 413 and 448, respectively).

The auxiliary request was held to meet the requirements of the EPC.

In reaching this finding, the claims were held to meet the requirements of novelty *inter alia* with respect to:

O4: US-A-5 817 721

in particular because the arguments in respect of the glass transition temperature (T_g) were based on implicit disclosures of this property which were not beyond reasonable doubt.

With respect to inventive step the closest prior art was:

O9: EP-A-980 894

from which the subject-matter claimed was distinguished by the defined T_g of the stiff copolymer and in that the polymer used in a minor portion was a soft aliphatic/aromatic copolyester with T_g<10°C instead of an aliphatic polyester.

It was held that the claimed feature combination resulted in films having improved properties (in

particular dead-fold), this finding being based on the observation that the examples of the patent provided ample evidence that an improvement was present. As there was no teaching in the prior art which would lead to the modifications made with respect to the teachings of 09 as a solution to the objective problem of providing a blend resulting in a film with *inter alia* improved dead-fold properties, the presence of an inventive step was acknowledged.

V. Both parties filed appeals against the decision.

(a) The opponent in its statement of grounds of appeal addressed the set of claims as upheld by the opposition division, raising objections in respect of added subject-matter, lack of novelty and lack of inventive step. Sufficiency of disclosure was not attacked.

In its submissions on inventive step the opponent further invoked the teachings of the following documents as secondary documents for combination with 09:

07: US-A-5 883 199

012: Journal of Polymer Degradation, Vol. 3, No. 4, 1995, 215-228

013: US-A-6 096 809.

(b) The patent proprietor with its statement of grounds of appeal maintained the patent as granted as main request and submitted 11 auxiliary requests.

Auxiliary request 1 differed from the main request by deletion of claims 2 and 12-15, thus claim 1 was the same as that of the granted patent.

Auxiliary request 2 corresponded to the set of claims as upheld by the opposition division.

It is not necessary for the purposes of this decision to discuss the remaining requests.

The patent proprietor advanced arguments in respect of added subject-matter, in particular allowability of the disclaimer and also addressed the matters of sufficiency of disclosure, novelty and inventive step.

(c) The opponent in its reply to the statement of grounds of appeal of the patent proprietor attacked the admissibility of the patent proprietor's appeal. Therein and in a subsequent submission objections in respect of the allowability of the disclaimer, novelty and inventive step were raised. Objections in respect of added subject-matter were raised in respect of claim 2 of the main request.

(d) The patent proprietor in two further submissions in reply to the statement of grounds of appeal of the opponent addressed the admissibility of the appeal, allowability of the disclaimer, novelty and inventive step.

VI. The board issued a summons to oral proceedings and a communication.

The allowability of the disclaimer was discussed. Comments on added subject-matter with respect to auxiliary request 2 (claims as maintained by the opposition division) were made.

With respect to novelty and inventive step it was briefly observed that the documents O4 and O9, respectively, appeared the most relevant.

The Board also noted in section 16 of the communication that the opponent had not raised objections with respect to sufficiency of disclosure.

VII. Both parties made further submissions. The opponent did not comment on the observation of the Board with respect to the objection of sufficiency of disclosure.

The proprietor filed with letter of 4 February 2019 17 sets of claims as auxiliary requests 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C, 4A, 4B, 4C, 8A, 8B, 8C, 10 and 11.

VIII. Oral proceedings were held before the Board on 4 April 2019.

The patent proprietor withdrew the set of claims filed as main request (i.e. claims of the patent as granted), with the result that the set of claims designated auxiliary request 1 became the main request.

Following discussion of the allowability of the disclaimer and the finding of the Board that this was not to be held unallowable, the Opponent stated that no further objections pursuant to Article 123(2) EPC were pursued in respect of the main request.

Moreover, the opponent sought to discuss objections with respect to sufficiency of disclosure.

IX. The arguments of the patent proprietor (appellant I) in respect of admissibility of the appeal and allowability of the main request (i.e. set of claims filed as

auxiliary request 1 with the statement of grounds of appeal) can be summarised as follows

(a) Admissibility of the appeal

The main request had been refused by the opposition division on the grounds of Article 100(c) EPC. This matter was fully addressed in the statement of grounds of appeal. Additionally, with due consideration for the requirements of Article 12(2) RPBA, the further requirements of the EPC were discussed for the main request, notwithstanding that these had not been dealt with in the decision of the opposition division.

Thus the statement of grounds of appeal fully complied with the requirements following from Rule 99(2) EPC.

(b) Article 123(2) - Admissibility of the disclaimer

The disclaimer had been introduced during examination proceedings in order to address an objection pursuant to Article 54(3) EPC with respect to examples 7 and 23 of D5, a document of the patent proprietor, cited in the search report and precisely reproduced the wording thereof.

The disclosure of D5 was uncertain to the extent that the compositions employed in the invoked examples 7 and 23 were not completely, unambiguously disclosed. This notwithstanding, it could be confirmed that the same materials as in the examples of the patent of suit had been employed therein - this had been established from internal documents. However this specific

information was not derivable from the disclosure of D5 itself.

The consequence of the incomplete nature of the disclosure of D5 was that the document could not be novelty destroying.

Under these circumstances the effect and the meaning of the disclaimer could be seen as questionable. This was however a problem with respect to the clarity of the claim pursuant to Article 84 EPC, which article was however not applicable since the disclaimer had been present in the claims of the patent as granted (G 3/14; OJ EPO 2015, 102).

Subsidiarily and independently of the relevance or need for the disclaimer, any unclarity present in the wording thereof, which in turn had its origin in the wording of D5, had been present in the claims as granted and therefore was likewise not open to an objection pursuant to Article 84 EPC (G 3/14, *supra*).

(c) Sufficiency of disclosure - admissibility of the objection

This matter had not been invoked by the opponent in its statement of grounds of appeal or the reply to the statement of grounds of appeal of the patent proprietor.

The matter of sufficiency of disclosure had been addressed only in the patent proprietor's statement of grounds of appeal. The Board in its communication had observed that objections in

respect of sufficiency of disclosure appeared no longer to be pursued. Even in the subsequent letter, the opponent did not comment on sufficiency of disclosure, let alone raise an objection with respect thereto.

The raising of this matter at the oral proceedings represented a late change of case, for which the patent proprietor was not prepared and was unable to deal with in the context of the oral proceedings.

(d) Novelty

Document O4 did not disclose the required features in combination. Rather a multiple selection from the disclosure was required for which there was no basis - explicit or implicit.

(e) Inventive step

The closest prior art was O9. The claimed subject-matter was distinguished therefrom by a number of features - in particular the presence of aliphatic/aromatic copolyester whereby the core teaching of O9 was the presence of aliphatic copolyester with polylactic acid (PLA) and the mandatory addition of plasticiser. A further difference was the specified Tg values which feature was also central to the invention. Even accepting, for the sake of argument, that the PLA of O9 had a Tg in the claimed range, the distinguishing feature would be the specific combination of synthetic biodegradable polymers with the specified Tgs.

The examples of the patent showed an optimisation

of properties - in particular Young's modulus and breaking stress - of the blends compared to the properties of the individual polymers. The values determined for the blends were not merely intermediate between those of the individual components but passed through a maximum, exceeding the value of either component individually.

Thus the problem was to be formulated as the provision of improved blends.

There was no prior art teaching that would lead to the claimed combination of polymers. In particular the teaching of O9 mandatorily required a plasticiser whilst the claimed compositions did not require this component.

Even disregarding the question of the absence of plasticiser, an inventive step still had to be acknowledged. There was no teaching in the prior art to select polymers for blending on the basis of the Tgs as now defined. O9 gave no indication to replace the aliphatic polyester by an aliphatic/aromatic polyester as claimed. The other documents invoked in particular O4, O7, O12 and O13 gave no hint to combine the two types of polymers as claimed for any reason.

- X. The arguments of the opponent (appellant II) in respect of the admissibility of the appeal of the patent proprietor and the allowability of the main request (i.e. the set of claims filed as auxiliary request 1 with the statement of grounds of appeal) can be summarised as follows:

(a) Admissibility of the appeal

In the patent proprietor's statement of grounds of appeal the discussion of the admissibility of the disclaimer directly addressed the findings of the opposition division. However with respect to the other requirements of the EPC the submissions were a mere repetition of those previously made. Therefore the appeal of the proprietor lacked proper substantiation and should be rejected as inadmissible.

(b) Article 123(2) EPC - allowability of the disclaimer

Accepting that the disclosure of D5 was ambiguous, such that it was not definitely novelty destroying the question arose as to what the purpose of the disclaimer was. In any case it could not be seen as complying with the requirements for the allowability of "undisclosed disclaimers" as laid down by the Enlarged Board in G 1/03 and G 2/03 (*supra*). In that respect clarity of the disclaimer is a condition for it to be allowable under Article 123(2) EPC.

(c) Sufficiency of disclosure - admissibility of the objection

It was acknowledged that this matter, relating to the definition of Tg, had not been raised in the written proceedings. At the time of drafting the statement of grounds of appeal in respect of the claims as maintained by the opposition division the issue was not considered significant. The statement of grounds of appeal of the patent proprietor had been filed subsequent to that of the opponent and

introduced the set of claims now being considered.

It had become apparent only during the discussions of novelty and inventive step at the oral proceedings that the Tg values were after all considered to be of significance. Consequently the objection in respect of sufficiency of disclosure - which pertained to this feature - should be admitted.

(d) Novelty

Document O4 taught generally compositions according to claim 1, i.e. based on mixtures of aliphatic/aromatic copolyester and polylactide. The compositions were suitable for sacks meaning they were capable of being blow moulded. Regarding the exemplified aromatic/aliphatic polyester P1, even if the Tg thereof was not explicitly disclosed, in view of the Tg reported for the precursor material Q1 it was inevitable that P1 would have a Tg in the claimed range. O4 contained a clear suggestion to combine polymer P1 with polylactide in the required proportions. Moreover, many documents showed that PLA always had a Tg in the required range for the stiff polymer, i.e. 50-60°C. As there was a large overlap in the proportions of the components of the compositions, to select just half of the known range could not confer novelty.

(e) Inventive step

O9 was the closest prior art, the distinguishing feature being the presence of the aromatic/aliphatic polyester instead of the aliphatic polyester of O9. No improvement was evident with

respect to the compositions of O9. The objective problem was thus the provision of further blends. The necessary modification was rendered obvious by the teachings, *inter alia* of O4, reference also being made to O7, O12 and O13 which likewise related to aliphatic/aromatic copolyesters.

O9 taught a range of Young's modulus and placed a limit on this property in order to avoid the composition becoming too rigid. Taking the objective problem, in the alternative, as being to improve the compositions of O9 then it would be obvious to consider further flexible polymers as disclosed generally in paragraph [0008] of O9 as a solution.

XI. Appellant I requested that the decision under appeal be set aside and that the patent be maintained on the basis of auxiliary request 1 (new main request), or on the basis of one of the sets of claims pursuant to auxiliary requests 2 to 9, all requests filed with the statement of grounds of appeal, or on the basis one of auxiliary requests 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C, 4A, 4B, 4C, 8A, 8B, 8C, 10 or 11, all as filed with letter of 4 February 2019.

XII. Appellant II requested that the appeal of the patent proprietor be rejected as inadmissible. In the alternative it requested that the decision under appeal be set aside and the patent be revoked. It also requested that none of auxiliary requests 1A-C, 2A-C, 3A-C, 4A-C, 8A-C, 10 and 11 submitted with the letter of 4 February 2019 be admitted to the procedure.

Reasons for the Decision

1. Admissibility of the appeal of the patent proprietor

In respect of the main request, i.e. the claims of the patent as granted, the opposition division considered only the issue of allowability of amendments (Article 123(2) EPC) in its decision, concluding that these requirements were not satisfied. Appellant I addressed this matter, i.e. the grounds leading to refusal of the main request in its statement of grounds of appeal, which is not contested by appellant II.

As no other issue was addressed with regard to the main request, the requirements of Rule 99(2) EPC are fulfilled independently of the submissions on other requirements of the EPC. Therefore the objection of appellant II against the admissibility of the appeal is not successful.

2. Sufficiency of disclosure - admittance of the objection

Appellant II did not raise objections under this provision of the EPC either in its statement of grounds of appeal or in the reply to the statement of grounds of appeal of the patent proprietor, even though the patent proprietor in section IV.2 of its statement of grounds of appeal addressed this matter with explicit reference to the arguments invoked by the opponent before the opposition division.

In its reply to the statement of grounds of appeal of the opponent (letter dated 23 January 2017, page 2, first two lines) the patent proprietor observed that the opponent appeared no longer to pursue the objection in respect of sufficiency of disclosure.

In the three subsequent written submissions of the opponent (16 June 2017, 2 August 2017 and 22 February 2018) no reference was made to sufficiency of disclosure.

In the Board's communication it was observed that the ground of sufficiency of disclosure appeared no longer to be invoked (section 16, second sentence).

The Opponent also did not address this ground even in its letter dated 4 March 2019, i.e. subsequent to receipt of the communication and thus in full knowledge of the position of the Board noting the absence of an objection in respect of sufficiency of disclosure.

The raising of an objection of insufficiency of disclosure at the oral proceedings constitutes a change of case compared to that set out by the opponent in its statement of grounds of appeal and in the response to the statement of grounds of appeal of the patent proprietor (Article 12(2) RPBA), which change of case was presented subsequent to convening of oral proceedings (Article 13(1) RPBA).

The argument of the opponent in justification for this change of case, namely that the significance of the Tg became apparent only in the oral proceedings before the Board, is not convincing. This feature had been present in the set of claims filed at the outset of the appeal proceedings. Furthermore, the patent proprietor in its statement of grounds of appeal, and thus at the very outset of the appeal proceedings, made multiple references to the Tg in the context of various requirements of the EPC:

Section IV.1.1 - Allowability of the disclaimer
Section IV.1.2.1 - Article 123(2) EPC
Section IV.2 - Sufficiency of disclosure
Section IV.3.1 - Article 54 EPC
Section IV.4.1.1 - Article 56 EPC - objects of the invention
Section IV.4.1.2 and 3 - Inventive step with respect to O9 and O10.

The patent proprietor indicated in the oral proceedings that it was not in a position to deal with this objection on the occasion of the oral proceedings (Article 13(3) RPBA), and that adjournment would be required were this objection to be admitted.

Since the objection:

- represented a change of case as compared to that presented in the statement of grounds of appeal and the reply to the statement of grounds of appeal of the patent proprietor (Article 12(2) RPBA);
- had been raised after convening of oral proceedings (Article 13(1) RPBA);
- no justification was presented for raising this objection only at the oral proceedings and
- the patent proprietor stated that it was unable to address this matter without adjournment of the oral proceedings (Article 13(3) RPBA),

the Board finds it appropriate to exercise its discretion under Article 13(1) RPBA by not admitting the objection of insufficiency of disclosure raised at the oral proceedings to the procedure.

3. Main request (set of claims filed as auxiliary request 1 with the statement of grounds of appeal)

3.1 Allowability of the disclaimer

Claim 1 contains a disclaimer to two examples of WO-A-02/14430 (D5 in examination proceedings - a document comprised in the state of the art pursuant to Article 54(3) EPC). The disclaimer was held unallowable by the opposition division (section 2 of the reasons) on the grounds that it could not be concluded with certainty that D5 actually disclosed the stiff copolymer as defined by the positive features of the claim as a component of the blends.

Although the disclaimer faithfully and accurately repeated the wording of examples 7 and 23 of D5 it is apparent that the terms employed in these examples are ambiguous. Thus one component "PLA" is defined as being selected from a number of commercial products without stating which grade was used or specifying the properties of the material used. The lubricant is defined only generally as a "polyol ester". Similarly the definition of the two polyesters 1 and 2 is ambiguous and does not define specific products.

As a result of the ambiguity in respect of which components the examples of D5 actually employ and in particular whether the components fall within the scope of operative claim 1, these two examples cannot be seen as providing an unambiguous disclosure of compositions within the terms of the positive features of operative claim 1.

While the Board agrees with the decision under appeal in that it cannot be concluded that these examples are

novelty destroying for the subject-matter of claim 1 without the disclaimer, this does not necessarily mean that the requirements of Article 123(2) EPC are not met. In particular the objection of appellant II that the disclaimer removes more than necessary to restore novelty cannot be followed. Indeed as the wording of the examples is carefully repeated nothing more than what these examples disclose is potentially removed from the claims, but to the extent that the examples are not novelty destroying, indeed nothing is in fact removed.

It is also the case that this formulation which as noted above, is bereft of function has not, e.g. as a result of amendments to the claim, become in effect an ex-disclaimer which is no more required but cannot be removed due to the provisions of Article 123(3) EPC.

The objection under Article 123(2) EPC of Appellant II against the disclaimer is therefore not successful.

The remaining issues concern clarity of the disclaimer which is a further and separate requirement that the disclaimer has to meet (G 1/03, consideration 2.4 of the Headnote), but is not open to objection in the present case because the disclaimer was present in granted claim 1 (G 3/14, Headnote).

3.2 Novelty

Document O4 relates to biodegradable polyesters designated Q1 which are prepared by reaction of a precursor - P1 with a divinyl ether (claim 1). According to column 9, lines 22-25, 0.5-20 wt% of the polyester can be combined with 99.5-80 wt% polylactide.

The proportions of the two polymers thus overlap with the ranges specified in the operative claim, which requires that the copolyester be present in an amount of 2 to 50 wt%.

Regarding the nature of the polyester, according to the generic disclosure of O4 P1 is an aliphatic/aromatic copolyester since adipic acid and terephthalic acid units are mandatorily present (claim 1; column 1, lines 16-23 - component (b1)).

The Tg of the polyester Q1 is not reported in the general description or the claims of O4. In example 1 the precursor P1 is prepared in two steps (a) and (b). The Tg of the precursor resulting from step (b) is reported as -42°C. This precursor is subjected to further reaction with butanediol divinyl ether in example 2. The Tg of the resulting product is not reported. The same precursor is reacted with several compounds in example 3 resulting in a product with a Tg of -43°C.

According to operative claim 1, the polyester forms the "soft" polymer and is required to have a Tg of less than -10°C.

In any case O4 does not disclose a blend of the polyester of the examples with any other polymer. Thus there is no disclosure of such polymer - whatever its Tg might be - in combination with a stiff polymer as defined according to operative claim 1.

Regarding the passage at O4, column 9, lines 22-25, relating to preferred blends, there is likewise no explicit disclosure of a blend of polymers having the required Tg properties in the required proportions.

Accordingly O4 fails to provide a disclosure of the subject-matter claimed, leading to the conclusion that lack of novelty in respect of this document has not been proven.

3.3 Inventive Step

3.3.1 Closest prior art

The patent is directed to the provision of biodegradable polymer blends in particular for sheets and films destined for packaging application (first paragraph of the patent). These films should exhibit good properties under a range of conditions rendering them suitable for various uses and also be biodegradable (first section of the patent entitled "The Relevant Technology").

It was a matter of consensus that the closest prior art was represented by O9 which is directed to a biodegradable polylactic acid-based composition and film thereof (title, paragraph [0001] of the disclosure, section entitled "Background Art"). O9 addresses the problem of rendering polylactic acid suitable for various uses which require flexibility, such as biodegradable agricultural multi-films, food packaging bags, refuse bags and other film packaging uses (paragraphs [0005] and [0006]). It is noted that the biodegradable component - polylactic - acid is rigid, and so the problem was to render compositions containing this biodegradable component suitably flexible (paragraphs [0007]-[0012]).

O9 addresses the stated problem by blending the polylactic acid with an aliphatic polyester having

melting point 80-250°C and a biodegradable plasticiser (claim 1, paragraph [0013]).

The proportion of the two polymers is given as 50-90 wt% polylactic acid and 10-50 wt % of the aliphatic polyester (claim 1, paragraph [0014]).

3.3.2 Distinguishing feature

The subject-matter of operative claim 1 is distinguished from the disclosure of 09 in that an aliphatic-aromatic copolyester is employed and in that the two components have Tg in specific ranges. Since claim 1 is formulated in an open manner, i.e. defining the blend as "comprising" the named components, further materials, such as plasticisers, are not excluded.

3.3.3 Technical effect

None of the examples of the patent provide a comparison with the subject-matter of 09.

The examples of the patent employ blends of Biomax 6926 (modified PET) as the stiff polymer (paragraphs [0047]-[0049], examples) with Ecoflex-F which is an aliphatic/aromatic copolyester (paragraphs [0061], [0062], examples).

The examples of the patent employ different proportions of the two polymers together with either silica or talc filler (examples 1-3, 4, 5), or blends of Ecoflex F with polylactic acid and starch - which is also considered to be a soft polymer in certain cases (paragraph [0074]).

In figure 4 it is shown that the breaking stress of

blends of Biomax and Ecoflex (top three lines in the figure) is higher than that of either Biomax (bottom two lines) or Ecoflex (third from bottom line) alone. Figure 9 shows that blends of the two polymers have higher modulus than either polymer separately.

3.3.4 Objective technical problem, its solution

The data of the patent in suit do not make it possible to discern whether any technical effect is associated with the above noted distinguishing feature with respect to O9, i.e. the mandatory presence of an aliphatic/aromatic polyester. However they do show that the claimed blends have satisfactory mechanical properties for packaging applications.

Thus in the light of the available evidence the problem that with respect to O9 is the provision of further biodegradable polymer blends which have satisfactory mechanical properties for packaging applications.

This problem was solved by employing an aliphatic-aromatic polyester which has the Tg of the two components in the required ranges.

3.3.5 Obviousness

O9 does not teach the type of soft polymer required according to operative claim 1 (aliphatic-aromatic polyester).

Furthermore it would be contrary to the teaching of O9 which requires the presence of an aliphatic polyester to employ an aliphatic/aromatic copolyester either as an alternative to, or in combination with, the aliphatic polyester (which combination, due to the open

wording of the operative claims is not excluded).

Thus even though, in view of the absence of evidence for a technical effect arising from the distinguishing feature with respect to O9, the problem to be solved has been formulated simply as the provision of further compositions with satisfactory properties for packaging applications, the claims define a modification of the subject-matter of O9 which discards or diverges from a central element of O9 and which furthermore is not suggested by any of the cited documents to give rise to blends with satisfactory mechanical properties for packaging applications. Such a teaching is in particular not to be found in O4. Nor do the other documents invoked by the opponent in this connection, namely O7, O12 and O13 provide the necessary information.

Accordingly the Board can come to no other conclusion that obviousness with respect to O9 as closest prior art has not been shown.

Order

For these reasons it is decided that:

1. The appeal of appellant I is admissible.
2. The decision under appeal is set aside.
3. The case is remitted to the opposition division with the order to maintain the patent in amended form on the basis of claims 1 to 18 according to auxiliary request 1 filed with the statement of grounds of appeal and after any necessary consequential amendment of the description.

The Registrar:

The Chairman:



B. ter Heijden

D. Semino

Decision electronically authenticated