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D E C I S I O N
of 28 November 1995

Case Number: T 0434/92 - 3.3.3
Application Number: 85112303.4
Publication Number: 0176989
IPC: C08L 81/06
Language of the proceedings: EN

Title of invention:
Molded articles manufactured from blends of a biphenyl
containing poly(aryl ether sulfone) and a poly(aryl ether
ketone)

Patentee:
AMOCO CORPORATION

Opponent:
BASF Aktiengesellschaft, Ludwigshafen

Headword:
-

Relevant legal provisions:
EPC Art. 54, 123(2)

Keyword:
"Novelty - introduction of disclaimer - allowable"

Decisions cited:
T 0004/80; T 0198/84; T 0860/93

Catchword:
-



Case Number: T 0434/92 - 3.3.3

DECISION
of the Technical Board of Appeal 3.3.3
of 28 November 1995

Appellant:
(Proprietor of the patent) AMOCO CORPORATION
200 East Randolph Drive
P.O. Box 5910-A
Chicago
Illinois 60680 (US)

Representative:
Barz, Peter, Dr
Patentanwälte Dr V. Schmied-Kowarzik
Dipl.-Ing. G. Dannenberg
Dr P. Weinhold Dr D. Gudel
Dipl.-Ing. S. Schubert Dr P. Barz
Siegfriedstrasse 8
D-80803 München (DE)

Respondent:
(Opponent) BASF Aktiengesellschaft, Ludwigshafen
- Patentabteilung - C6 -
Carl-Bosch-Strasse 38
D-67056 Ludwigshafen (DE)

Representative: -

Decision under appeal: Decision of the Opposition Division of the
European Patent Office of 12 February 1992, issued
in writing on 18 March 1992 revoking European
patent No. 0 176 989 pursuant to Article 102(1)
EPC.

Composition of the Board:

Chairman: C. Gérardin
Members: R. Young
J. A. Stephens-Ofner

Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 176 989, relating to "Molded articles manufactured from blends of a biphenyl containing poly(aryl ether sulfone) and a poly(aryl ether ketone)", with six claims, in respect of European patent application No. 85 112 303.4, filed on 27 September 1985 and claiming a US priority of 28 September 1984 (US 655 580) was announced on 19 April 1989 (Bulletin 89/16). Claim 1 as granted read as follows:

"Molded articles manufactured from blends comprising a biphenyl containing from 5 to 95 weight percent of poly(aryl ether sulfone) and from 95 to 5 weight percent of a poly(aryl ether ketone) containing no ortho hydroxyl groups and having a reduced viscosity of 0.3 to 5.0 dl/g."

Claims 2 to 6 were dependent claims directed to elaborations of the articles defined in Claim 1.

- II. Notice of Opposition was received on 17 January 1990 on the ground of Article 100(a) EPC, alleging in particular that the subject-matter of Claim 1 lacked novelty in the light of the disclosure of the document:

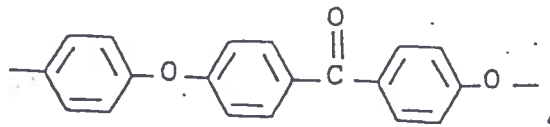
D1: EP-A-0 059 077

- III. By a decision which was given at the end of oral proceedings held on 12 February 1992 and issued in writing on 18 March 1992, the Opposition Division revoked the patent, on the basis that Claim 1 of the

main request, filed with a submission received on 10 September 1990, lacked novelty. Claim 1, which had been corrected in respect of an obvious error and furthermore included a disclaimer, read as follows:

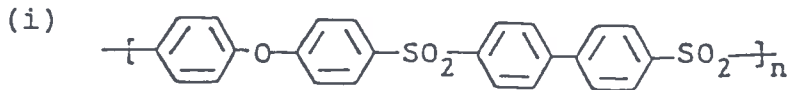
"Molded articles manufactured from blends comprising from 5 to 95 weight percent of a biphenyl containing poly(aryl ether sulphone) and from 95 to 5 weight percent of a poly(aryl ether ketone) containing no ortho hydroxyl groups and having a reduced viscosity of 0.3 to 5.0 dl/g; films and sheets manufactured from a blend of

- (a) a poly(aryl ether ketone) containing therein at least 50 weight percent of a repeating unit of formula

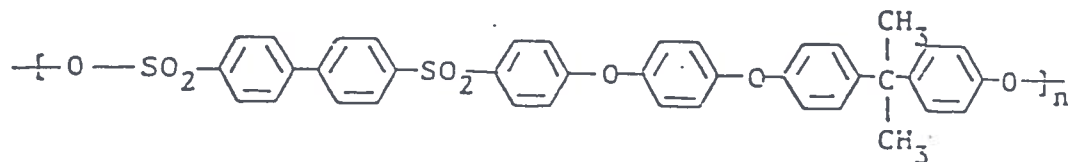


alone or in combination with one or more different repeating units, and

- (b) up to 50 weight percent of poly(aryl ether sulfone) having repeating units of the following formulae:



(ii)



being excluded." (see Reasons for the decision, para. I.7.1)

Furthermore, the auxiliary request, filed at the oral proceedings, in which the words "films and sheets" in the disclaimer had been replaced by "molded articles" (see Reasons for the decision, para. I.7.2) contravened Article 123(2) EPC.

According to the decision with regard to the main request, although a disclaimer might be used to establish novelty, following the decision T 0004/80 (OJ EPO 82, 149), if the subject-matter remaining in the claim could not be defined directly (positively) more clearly and concisely, and when, for example, there was no real relationship to the subject-matter of the claim, nevertheless, in the case in suit, the properties of the disclaimed subject-matter were close to those of the remaining subject-matter, so that the properties evidenced in the patent in suit were also inherent in the films and sheets defined in the disclaimer (Reasons for the decision, para. 2.2.3.1).

Although the shaping of the composition according to D1 by extrusion was regarded as moulding, the disclaimer in question would, from a purely formal point of view, have established the novelty of Claim 1, since it cut out all of the originally overlapping disclosure of D1. Nevertheless, by applying the principles developed in the decision T 0198/84 (OJ EPO 85, 209) to the question of "negative" selection, i.e. where the claimed subject-matter was only partly known, novelty could only be established by way of a disclaimer, if the remaining subject-matter was distinguished in terms of properties and capabilities from the known subject-matter (Reasons for the decision, paras. 2.2.2 and 2.2.3.2).

Furthermore, a disclaimer was not permissible where a corresponding "positively" defined claim would not have been inventive.

Consequently, the introduction of the disclaimer was not admissible, since the overlap with the disclaimed prior art was not purely incidental and the objective technical contribution of the remaining subject-matter was not clear.

With regard to the auxiliary request, there was no basis in D1 for the term "molded article", so that the contents of the disclaimer were not clearly and unambiguously derivable from the relevant document.

IV. On 8 May 1992, a Notice of Appeal against the above decision was filed, together with payment of the prescribed fee.

In the Statement of Grounds of Appeal filed on 17 July 1992, the Appellant (Patentee) argued, in relation to the main request, in essence as follows:

- (a) The requirement, according to the decision under appeal, for there to be "no real relationship" between the novelty-destroying disclosure and the subject-matter of the anticipated claim was a new and unacceptable condition, which would not be fulfilled even in cases where there was general agreement that a disclaimer could be used to establish novelty.

Such cases would be, for example, (i) the disclaiming, from a group of new chemical compounds covered by a general formula which had been shown to exhibit unexpected and beneficial properties, of a single compound already known in a different

context not suggesting the beneficial properties of the group, even if the known compound were the most effective of the originally claimed group, and (ii) the exclusion of a (small) portion of claimed subject-matter which did not solve the technical problem.

- (b) In particular, the conception that specifically distinguishing properties and capabilities were a prerequisite for the allowability of such a disclaimer was mistaken, since the determination of such properties and capabilities belonged to the assessment of inventive step and not of novelty.
- (c) It was not justified to apply principles developed for selection inventions to the crucially different case of a "negative" selection, where there was no generic prior disclosure from which the claimed subject-matter had to be distinguished.
- (d) Claim 1 did not encompass any films (irrespective of the process of manufacture thereof) which had been made from a blend having the composition defined in the disclaimer and was therefore clearly distinguishable from the known subject-matter of D1.

Hence, the question of whether an extruded film or sheet could be categorised as a moulded article within the meaning of Claim 1 did not need to be dealt with, though the view expressed in the decision under appeal in this respect was not necessarily shared.

- (e) A "positive" restriction of Claim 1 instead of a disclaimer would have demanded a recital of every conceivable form of moulded article which was not a

film or sheet, which would firstly contradict the requirement for conciseness in Article 84 EPC and secondly would lead to undesirable drafting practices in the future.

- (f) Finally, in relation to the technical contribution, the decision under appeal did not itself address the question of inventive step, so an alleged lack of underlying inventive step could not be a ground for disallowing the disclaimer.

With regard to the auxiliary request, the Appellant argued that it was unfair to take the position on the one hand that D1 was a generic disclosure of moulded articles, but on the other hand its disclosure was insufficient to justify a disclaimer of such articles.

V. The Respondent (Opponent) argued in essence as follows:

- (a) The patent in suit concerned moulded objects made of certain polymer blends, whereas D1 disclosed films and sheets made of blends which were embraced by those of the patent in suit. The neutral position taken by the Appellant (cf. Section V. d), second sentence, above) was indicative of a deficiency of counterarguments.
- (b) Contrary to the extensive arguments put by the Appellant in defence of the disclaimer, a positive restriction of the claimed subject-matter would indeed have been possible, for example, by following a suggestion made by the Opposition Division at the oral proceedings, to adopt, subject to deletion of the second listed repeating unit of the polysulphone, the subject-matter of Claim 3 as granted.

It thus had to be concluded that the requirement that the remaining subject-matter could not technically be defined directly (positively) more clearly and concisely was not fulfilled.

- (c) The reluctance of the Appellant to introduce a positive form of limitation might have been due to the fact that the question would arise as to what technical problem was solved, i.e. which advantages were shown, by the remaining biphenyl containing polyarylethersulphones according to the patent in suit, compared with those known from D1, for the establishment of an inventive step.
- (d) The main request furthermore did not fulfil the requirements of Article 84 EPC, since the point at which a moulded article became a film or sheet could not be established.
- (e) The cases referred to by the Appellant where there was general agreement to the use of a disclaimer (i) would not have supported an inventive step or (ii) did not apply to the situation in the patent in suit, where a large area, corresponding to two categories of polymers was excluded, and which moreover represented a successful solution of the technical problem.
- (f) The decision under appeal was thus entirely correct in its recognition that a determination of the technical problem was not possible because the claimed subject-matter remaining was inseparable from that excluded by the disclaimer.

VI. The Appellant requested that the decision under appeal be set aside and the patent maintained on the basis of the main claim according to the main request specified

under item I.7.1 in said decision or, at least on the basis of the main claim according to the auxiliary request specified under item I.7.2, or, in the alternative, oral proceedings.

The Respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

Main request

2. *Article 123 EPC*

The Board concurs with the finding of the decision under appeal that the main request meets the requirements of Articles 123(2) and (3) EPC. In particular it concurs that the disclaimer is allowable under Article 123(2) EPC, since it is based on the disclosure in D1 in Claim 1; page 2, line 30; page 3, compound with repeating unit (2), and page 4, compound with repeating unit (14), and also under Article 123(3) EPC, since the disclaimer restricts the scope of protection conferred. This view was in any case not disputed by the parties.

The amendments are thus allowable under Article 123 EPC.

3. *Article 84 EPC; clarity*

The question of whether the requirements of Article 84 EPC are met is determined when the claim is read by the person of normal skills including any knowledge derived from the state of the art (T 0860/93 OJ EPO 1995, 047).

In the present case, the only discussion with regard to clarity concerned the relationship between the terms "molded article" and "films and sheets" in Claim 1.

- 3.1 With regard to the term "molded article", whilst the Appellant did not necessarily share the view, expressed in the decision under appeal, that the term included extruded sheets as disclosed in D1, neither did it contest the point, preferring instead generically to disclaim the sheets according to D1.

In particular, there was no suggestion that the term "molded article" was obscure in itself. The Board also sees no reason to regard the term "molded article" as obscure.

- 3.2 Furthermore, the natural and ordinary meaning of the terms "sheet" and "film" is, in the Board's view, evident to the skilled person. Consequently, neither of these terms can be regarded as obscure in itself.

- 3.3 Finally, it was not disputed that the disclaimer introduced into Claim 1 cut out any originally overlapping subject-matter (cf. Reasons for the decision, para. 2.2.2).

Consequently, even if there is overlap as regards the terms "sheets" and "films" with the term "molded article", the mere fact of such overlap cannot give rise to ambiguity, because the only relevant prior art document disclosing such sheets or films is D1, and the films disclosed here are generically excluded by the terms of the disclaimer.

- 3.4 In summary, the Claim 1 is clear as required by Article 84 EPC.

4. *Article 84 EPC; conciseness*

The objection of the Respondent, that the disclaimer could have been avoided if a restriction had been made to part of the subject-matter of Claim 3 is beside the point, because the subject-matter of the suggested claim does not correspond to that of Claim 1, but only to a part of it. This conclusion would apply to any listing of the individual polysulphones disclosed in the patent in suit.

On the contrary, the relevant requirement derivable from the decision T 0004/80, cited in the decision under appeal is that the subject-matter remaining in the claim in question (i.e. Claim 1 and not Claim 3, etc.) cannot be defined directly, i.e. by positive technical features more clearly and concisely (section III., above).

According to the undisputed submission of the Appellant in the Statement of Grounds of Appeal, however, the recital of all the remaining types of moulded objects not excluded by the disclaimer would be lengthy, and would lead to undesirable drafting practices in the future.

This is considered to fulfil the requirement of the decision T 0004/80, since such a recitation would be not be concise.

Hence, Claim 1 including the disclaimer is considered to be concise in the sense of Article 84 EPC.

5. *Novelty*

It is clear from the decision under appeal that the only obstacle seen by the Opposition Division to a recognition of novelty in the subject-matter of Claim 1 lay the admissibility of the disclaimer (cf. section III., above).

The issue to be determined in this appeal is, therefore, whether the objections raised to the introduction of the disclaimer are justified.

5.1 According to D1, there is disclosed a method for the orientation of films made of a thermoplastic polyether ether ketone, which involves rolling the film or sheet by the use of at least one pair of pressure rolls while applying to the film or sheet a backward tension (page 1, opening para.; Claim 1). The polymer may also contain, for the purpose of improving the fluidity in extrusion processing, up to 50 wt% of heat resistant polymers, e.g. a polyarylene polyether sulphone (page 2, last para., page 3 and Claim 4).

According to Example 2, 80% by weight of a thermoplastic polyether ether ketone resin and 20% by weight of a specified polyarylene polyether sulphone resin (200 P, produced by I.C.I. Limited) were blended, and the mixture was granulated, followed by extruding from a 400 nm wide T-die using a screw extruder having a diameter of 300 nm to form a 300 µm thick sheet.

The raw sheet was rolled by means of a pair of pressure rolls to obtain a rolled sheet, with or without a polyethylene glycol (200 units chain length) lubricant.

Thus the only effect directly associated with the addition of a polysulphone, apart from the heat resistance of the polymer itself, is that of improved fluidity in extrusion processing.

- 5.2 The function of a disclaimer is to excise a portion of the subject-matter of an already existing claim, for instance to exclude an area of prior disclosure.

In this connection, the Board is not aware of anything in the cited decision T 0004/80 or elsewhere, which would justify a general requirement for there to be "no real relationship" of the disclaimer to the novelty destroying subject-matter (cf. decision under appeal, Reasons for the decision, para. 2.2.3.1).

Whilst the decision under appeal does not define precisely what is meant by "no real relationship", nevertheless if there were no relationship at all between the subject-matter of a claim and that of a disclaimer, the latter would clearly not succeed in its function of excising part of the former.

Consequently, the fact alone that the subject-matter excised by a disclaimer is related in some way to that remaining after excision is not a justified objection to the introduction of a disclaimer.

- 5.3 In the present case, the subject-matter excised by way of disclaimer is based on the relevant prior disclosure of D1 (section 2., above). It must be emphasised, however, that the subject-matter that is disclaimed corresponds to information content of the prior disclosure, as it would be read by the skilled person.

Consequently, the content of the subject-matter here disclaimed cannot exceed what is directly and unambiguously derivable from the relevant prior disclosure.

- 5.4 In particular, the properties and effects which can be said to form part of the subject-matter of the disclaimer are only those which such a disclosure directly and unambiguously makes available.

Thus, any effect or property which is not so made available, is no part of the subject-matter disclaimed.

- 5.5 The patent in suit is concerned with moulded articles manufactured from polymer blends which have limited miscibility and excellent mechanical compatibility. They possess a good balance of properties including higher modulus, impact resistance, solvent resistance and resistance to environmental stress cracking (page 2, lines 3 to 6). Examples are provided in this connection giving specific numerical values. In particular, the results of environmental stress rupture tests in which a cotton swab was placed on the centre of a tensioned polymer specimen and saturated with a respective test environment (an organic solvent) are given, for instance, in Table VI.

Thus, one of the effects with which the patent in suit is concerned but which is not mentioned in D1 is the phenomenon of resistance to environmental stress cracking, in particular in an organic solvent environment.

5.5.1 Such a property is not intrinsic to the polymer products disclosed in D1, since it is not a property of the polymer itself but the result of an interaction of the polymer with an external environment (the organic solvent) under specific conditions of tension loading. It is therefore an extrinsic property of the polymer.

5.5.2 There is, however, no disclosure in D1 of any such external testing environment, let alone any such test. Nor can the automatic application of such a specialised test be regarded as belonging to the general knowledge of the skilled person.

Consequently, there is no disclosure in D1, or, therefore, in the disclaimer, of such a property.

5.6 Therefore, the view expressed in the decision under appeal, according to which the properties evidenced in the opposed patent are also "inherent" to the films and sheets as defined in the disclaimer is not supported by the content of D1 or of the disclaimer, at least to the extent that "inherent" is taken to mean "inherently disclosed".

In summary, the essential objection of uniformity of subject-matter between the disclaimer and the remainder of Claim 1, i.e. of lack of distinguishing properties and capabilities of the remaining subject-matter of Claim 1 cannot be maintained.

5.7 The aspect of the argument in the decision under appeal concerning "negative" selection, based on principles cited from the decision T 0198/84 (section III., above) is misconceived, in the Board's view, for two reasons.

5.7.1 In the first place, the cited decision was concerned with establishing the novelty of a sub-range compared with a fairly broad range of numbers, i.e. a purposive selection (see Headnote). The nature of a disclaimer in the present context is not, however, in the Board's view, directly comparable with that of a purposive selection. On the contrary, it is essentially a non-purposive de-selection. Indeed, it is admitted in the decision under appeal itself, in the context of the expression "negative" selection, that there is no question of selection in the present case (Reasons for the decision, para. 2.2.3.2).

Consequently, there is no justification for the imposition of conditions specific to a selection situation in the present case.

5.7.2 Secondly, and notwithstanding the above, the cited decision makes it clear that the Board in that case followed a general principle as to novelty, namely that the sub-range singled out of a larger range is new **not** by virtue of a newly discovered effect occurring only within it. An effect of this kind is not therefore a pre-requisite for novelty (Reasons for the decision, para. 7).

If the presence of such an effect is not a pre-requisite for novelty, it cannot, logically, be a pre-requisite for the introduction of a disclaimer either.

5.7.3 The imposition, according to the decision under appeal, of such a requirement is therefore directly contradictory to the principles set out in the jurisprudence relied upon.

On the contrary, a correct application of the general principle would have led to the opposite conclusion, namely that there was no requirement for a distinguishing property or capability between the disclaimer and the remainder of the subject-matter of Claim 1.

Thus, even if the properties and capabilities of the disclaimed subject-matter had been inherently disclosed in the sense of section 5.6, above, this would not have been a condition for establishing novelty, or, therefore, for disallowing the disclaimer.

In summary, the considerations applying in the decision T 0198/84 do not form an obstacle to allowing a disclaimer in the present case.

- 5.8 The further objection in the decision under appeal, that it is not clear what objective technical contribution there is in the remaining subject-matter as compared with the disclaimed subject-matter (Reasons for the decision, para. 2.2.3.1, last sentence) is, in the Board's view, merely a re-statement of the requirement for a distinguishing property or capability dealt with in sections 5.1 to 5.7 etc., above. It is invalid for the same reasons.
- 5.9 The objection that a disclaimer would not be allowable if the subject-matter of the corresponding, positively limited claim would not involve an inventive step is a hypothetical and indeed speculative objection, since no such corresponding positive formulation has been elaborated.

In any case, no unfavourable determination of inventive step has been established in the decision under appeal. On the contrary, the opinion expressed in the communication issued on 26 February 1991 by the Opposition Division appears generally favourable to the recognition of inventive step, even going so far as to say that a decision could be made without oral proceedings (cf. para. 3,3, 4 of the communication).

- 5.10 In view of the above, none of the objections raised stands in the way of allowing the disclaimer. Nor is the Board aware of any further objections in this respect.

Consequently, the disclaimer is an allowable form of amendment in this case.

- 5.11 It is, furthermore, clear from the statement in the decision under appeal, according to which "from a purely formal point of view the novelty of the subject-matter of Claim 1 would be established" (Reasons for the decision, para. 2.2.2), that the subject-matter of Claim 1 including the disclaimer was in fact considered to be distinguished from the state of the art as represented by D1.

The Board sees no further obstacles to the recognition of novelty in the subject-matter of Claim 1.

Consequently, the subject-matter of Claim 1 is considered to be novel.

6. *Inventive step*

Since the issue of inventive step has not been addressed in the decision under appeal, there is no definitive finding on which the Board could at this stage comment.

Consequently, and in order to avoid a loss of instance, the Board has decided to make use of its powers under Article 111 EPC to refer the case back to the first instance for determination of the latter issue.

7. It is therefore neither necessary for the Board to consider the claims forming the auxiliary request of the Appellant, nor to appoint oral proceedings, since these were not requested by the Respondent.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance, for further prosecution on the basis of the set of claims according to the main request, i.e. Claim 1 as filed on 10 September 1990 and Claims 2 to 6 of the patent as granted.

The Registrar:


E. Görgmaier

The Chairman:


C. Gérardin