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**Datasheet for the decision
of 21 September 2022**

Case Number: T 2319/19 - 3.3.03

Application Number: 09795586.8

Publication Number: 2358786

IPC: C08G63/199

Language of the proceedings: EN

Title of invention:

POLYESTER COMPOSITIONS WHICH COMPRISE SPIRO-GLYCOL,
CYCLOHEXANEDIMETHANOL, AND TEREPHTHALIC ACID

Patent Proprietor:

Eastman Chemical Company

Opponent:

Vossius & Partner
Patentanwälte Rechtsanwälte mbB

Relevant legal provisions:

EPC Art. 54, 111(1)
RPBA 2020 Art. 11, 12(2)

Keyword:

Novelty - main request (yes)
Remittal - special reasons for remittal



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Case Number: T 2319/19 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 21 September 2022

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 19 June 2019
revoking European patent No. 2358786 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman O. Dury
Members: M. Barrère
L. Basterreix

Summary of Facts and Submissions

- I. The appeal of the patent proprietor lies against the decision of the opposition division revoking European Patent number 2 358 786.
- II. The following documents were *inter alia* cited in the opposition division's decision:
 - D1: JP 2003-292593 A
 - D1a: English translation of D1
 - D4: US 6447859 B2
 - D5: US 2003/0068455 A1
- III. In that decision the opposition division held, among others, that auxiliary request 3 filed with letter of 20 May 2019 complied with the requirement of sufficiency of disclosure. However the subject-matter of claim 1 of said request was not novel over example 6 of D1.
- IV. The patent proprietor (appellant) filed an appeal against said decision. With the statement of grounds of appeal, the appellant filed a main request as well as auxiliary requests 1, 2, 2a, 3, 4 and 5.
- V. With letter of 17 August 2022, the appellant withdrew the main request as well as auxiliary requests 1, 2, 2a, 4 and 5.
- VI. Oral proceedings were held before the Board on 21 September 2022.

VII. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request, filed as auxiliary request 3 with the statement of grounds of appeal. Furthermore, should the Board consider that the main request meets the requirements of Article 54 EPC, the appellant requested that the case be remitted to the department of first instance for further discussion of inventive step.

The respondent (opponent) requested that the appeal be dismissed. They further requested that the case not be remitted to the department of first instance.

VIII. The claims of the main request read as follows:

"1. A polyester composition comprising at least one polyester which comprises:

(a) a dicarboxylic acid component comprising:

- (i) 80 to 100 mole % of terephthalic acid residues;
- (ii) 0 to 20 mole % of aromatic and/or aliphatic dicarboxylic acid residues having up to 20 carbon atoms; and

(b) a glycol component comprising:

- (i) 1 to 49 mole % spiro-glycol residues; and
- (ii) 51 to 99 mole % at least one glycol chosen from at least one of 1,4-cyclohexanedimethanol residues and 2,2,4,4-tetramethyl-1,3-cyclobutanediol residues;

wherein the total mole % of the dicarboxylic acid component is 100 mole %, and wherein the total mole % of the glycol component is 100 mole %; and wherein the polyester does not contain ethylene glycol." (emphasis added by the Board)

"2. The polyester composition of Claim 1 wherein spiro-glycol is present in the amount of 20 to 45 mole %."

"3. The polyester composition of Claim 1 wherein spiro-glycol is present in the amount of 25 to 40 mole %."

"4. The polyester composition of Claim 1 wherein the inherent viscosity of the polyester is from 0.5 to 1 dL/g."

"5. The polyester composition of any of Claim 1 wherein the polyester has a Tg of 95°C to 140°C."

"6. The polyester composition of Claim 1 wherein the polyester comprises at least one modifying glycol chosen from diethylene glycol, 1,2-propanediol, neopentyl glycol, polytetramethylene glycol, 1,5-pentanediol, 1,6-hexanediol, p-xylene glycol, 1,3-propanediol and 1,4-butanediol or mixtures thereof."

"7. The polyester composition of Claim 1 wherein the 2,2,4,4-tetramethyl-1,3-cyclobutanediol residues is a mixture comprising 30 to 70 mole % of cis-2,2,4,4-tetramethyl-1,3-cyclobutanediol residues and 30 to 70 mole % of trans-2,2,4,4-tetramethyl-1,3-cyclobutanediol residues."

"8. A blend comprising the polyester composition of Claim 1 and comprising at least one polymer of poly(etherimides), polyphenylene oxides, poly(phenylene

oxide)/polystyrene blends, polystyrene resins, polyphenylene sulfides, polyphenylene sulfide/sulfones, poly(ester-carbonates), polycarbonates, polysulfones; polysulfone ethers, poly(ether-ketones), polyesters other than those of Claim 1, and mixtures thereof."

"9. The polyester composition of Claim 1 wherein the polyester composition comprises at least one additive chosen from colorants, mold release agents, phosphorus compounds, plasticizers, nucleating agents, UV stabilizers, glass fiber, carbon fiber, fillers, impact modifiers, or a mixture thereof."

"10. The polyester composition of Claim 1 wherein the b* color values for the polyesters useful in the invention is from -12 to less than 12 as determined by the L*a*b* color system."

"11. The polyester composition of Claim 1 wherein the polyester composition has a molecular weight distribution less than 2.5."

"12. An article of manufacture comprising the polyester composition of Claim 1 which comprises a film or sheet."

"13. An article of manufacture comprising the polyester composition of Claim 1 which comprises a thermoformed film or sheet."

"14. A process for preparing a polyester comprising the steps of:

(I) heating a mixture in the presence of a catalyst at a temperature of 150 to 240°C for a time

sufficient to produce an initial polyester, wherein said mixture comprises:

(a) a dicarboxylic acid component comprising:

- (i) 80 to 100 mole % of terephthalic acid residues;
- (ii) 0 to 20 mole % of aromatic and/or aliphatic dicarboxylic acid residues having up to 20 carbon atoms; and

(b) a glycol component comprising:

- (i) 1 to 49 mole % spiro-glycol residues; and
- (ii) 51 to 99 mole % of at least one glycol chosen from at least one of 1,4-cyclohexanedimethanol residues and 2,2,4,4-tetramethyl-1,3-cyclobutanediol residues;

wherein the total mole % of the dicarboxylic acid component is 100 mole %, and wherein the total mole % of the glycol component is 100 mole %;

(II) heating the initial polyester of step (I) at a temperature of 240 to 320°C for 1 to 4 hours; and

(III) removing any unreacted glycols;

wherein during said process, the molecular weight distributions of the polyester are less than 2.5."
(emphasis added by the Board)

IX. The appellant's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Reading of claim 1

The feature "ethylene glycol" meant residue of ethylene glycol and not free ethylene glycol.

(b) Novelty

The polyester of example 6 of D1 contained ethylene glycol residues. The subject-matter of claim 1 was therefore novel over example 6 of D1.

(c) Remittal

In the contested decision, the opposition division did not address the matter of inventive step. The present case should therefore be remitted to the opposition division in order to deal with this question.

X. The respondent's submissions, in so far as they are pertinent to the present decision, may be derived from the reasons for the decision below. They were essentially as follows:

(a) Reading of claim 1

The feature "ethylene glycol" could be read as meaning free ethylene glycol.

(b) Novelty

The polyester of example 6 of D1 contained no free ethylene glycol. Therefore claim 1 lacked novelty over example 6 of D1.

(c) Remittal

In order to avoid any undesirable prolongation of the entire proceedings, the present case should not be remitted to the department of first instance.

Reasons for the Decision

Main request

1. It is undisputed that the operative main request is identical to auxiliary request 3 on which the contested decision is based.

2. Reading of claim 1

Claim 1 of the main request is directed to a polyester composition comprising a polyester which is among others characterised in that it does not contain ethylene glycol (EG).

In the decision under appeal (see point 2.3.2 of the reasons), the opposition division took the view that the feature EG should be understood as an additive and/or impurity being present in the polyester composition and could not be understood in the sense that EG-units should be absent from the polyester backbone.

- 2.1 The appellant contests the opposition division's reading of the feature EG. In their view, it is clear for the skilled person that EG is a residue of the polyester and not a free molecule present in the composition. The arguments put forward by the appellant are explained in more detail below:

The polyester is a molecule. It would not make sense that a molecule contains another molecule. Instead the skilled person understands that EG relates to a building block of the polyester.

There is no inconsistency in the opposed patent with respect to the features "polyester" and "polyester composition", as can be seen from dependent claims 2 to 6 and 9 to 11, which make a clear distinction between these two features.

Finally the description provides a clear guidance showing that EG is to be understood as a residue of the polyester and not as a free molecule in a composition.

2.2 According to the respondent, another interpretation of claim 1 is possible. In the expression

"wherein the polyester does not contain ethylene glycol"

the term polyester could be understood as polyester composition. In fact, adhering to the exact wording of claim 1, this would be the only logical interpretation. Furthermore, claim 1 should be given its normal meaning and scope without considering other sections of the opposed patent. The respondent further contests that the dependent claims may lead to a different conclusion. With regard to claims 2 and 3, the situation is not the same because these claims refer to claim 1 wherein the spiro-glycol (SPG) is clearly a polyester residue and not a free molecule.

2.3 For the Board, a central principle of the claim interpretation is that the patent must be construed by

a mind willing to understand, not a mind desirous of misunderstanding (see Case Law of the Boards of Appeal, 10th edition 2022, II.A.6.1).

In the present case, claim 1 is directed to a polyester composition comprising a polyester. A central aspect of this claim is the definition of the monomers which constitute the building blocks (or residues) of the polyester. In particular, it is specified that the said polyester comprises

(a) a dicarboxylic acid component comprising terephthalic acid residues and optional other dicarboxylic acid residues and

(b) a glycol component comprising SPG residues as well as cyclohexanedimethanol residues and/or 2,2,4,4-tetramethyl-1,3-cyclobutanediol residues.

In view of this wording, the polyester is defined in claim 1 first as "comprising" the starting components used to prepare the polyester (dicarboxylic acid component and glycol component) and in terms of the building blocks making up the polyester itself (referred to as "residues" comprised in said components).

Claim 1 further specifies that "the polyester does not contain ethylene glycol". In this context, the Board is of the opinion that it makes not doubt for the skilled person that, in this feature of claim 1, EG is to be understood as a further glycol component (b) that could theoretically be "comprised" in the polyester if said feature was not present in the claim.

This means that the feature "the polyester does not contain ethylene glycol" imposes that EG is to be excluded from component (b) according to claim 1, which further implies that the polyester otherwise defined in claim 1 should not contain ethylene glycol residues.

The respondent considered that the literal wording of the claims should be followed. In that case the expression "the polyester does not contain ethylene glycol" would mean that the polyester does not contain free ethylene glycol (i.e. as an additive or impurity). However, this interpretation would not be limiting for the scope of claim 1 since the "composition" could nevertheless contain free EG from other sources. In line with the cited case law, the skilled person would rule out this interpretation as it is neither logical, nor limiting.

Although it is correct that, as put forward by the respondent, the components which are polymerised in the polyester are referred to as "residues" whereas EG is mentioned *per se*, it is noted that the term "residue" is only used in relation to compounds comprised in said (a) dicarboxylic acid component and (b) glycol component (numbered (i) and (ii)), but not in relation to the components (a) and (b) which are defined as being "comprised" in the polyester in claim 1. Therefore, the respondent's argument provides no cause to deviate from the above conclusion regarding the technically sensible meaning of the feature "wherein the polyester does not contain ethylene glycol" indicated above.

Already for these reasons, the Board considers that from the wording of claim 1 as a whole, the expression "wherein the polyester does not contain ethylene

glycol" imposes that the polyester otherwise defined in the claim does not contain ethylene glycol residues and not that said polyester should not contain EG as additives and/or impurities.

2.4 The respondent further argued that, in the expression

"wherein the polyester does not contain ethylene glycol",

the term polyester could be understood as polyester composition.

The Board cannot follow this claim interpretation as it does not fit into the context of claim 1, which primarily refers to the polyester being contained in the (whole) composition being claimed in terms of its starting components and structure and in particular in terms of the glycol building blocks. Therefore, already from the wording of claim 1 alone, a distinction is made between the whole polyester composition being claimed on one hand and the polyester contained therein on the other hand.

Furthermore, this suggested claim interpretation is not in line with the disclosure of the opposed patent as a whole. Indeed, as pointed out by the appellant, the other claims of the main request also make a clear distinction between the composition on one side and the polyester on the other side (see claims 4-6, 9 and 10 of the main request). Hence, although it is agreed with the respondent that the scope of claim 1 should be read on the basis of the wording of the claim itself and that it cannot be read in a different manner in view of the dependent claims, it remains that the Board cannot recognise any basis in the present set of claims for an

inconsistency with regard to the meaning of the term polyester, which may have led the skilled person to consider that the term "polyester" in claim 1 could be read in a different manner than the one derivable from the wording of the claim itself (in particular so that it means "polyester composition", as put forward by the respondent).

Finally, the Board sees no reason to come to a different conclusion even if the description of the patent specification were to be considered. For instance, in paragraph [0044] lines 11-13, the description uses the same wording as in claim 1 and teaches that a polyester containing 10 mole% of isophthalic acid means that the polyester includes 10 mole% of isophthalic acid residues. The same formulation is used in example 1 of the opposed patent which discloses a polyester containing 100 mole% terephthalic acid, 36 mole% spiro-glycol and 64 mole% 1,4-cyclohexanedimethanol, it being clear that the monomers are the building blocks of the polyester and not free molecules in the polymer. It is further pointed out that the polyesters of examples 1 and 2 of the opposed patent are free of ethylene glycol residues while the polyesters of comparative examples 3 and 4 comprise respectively 45 mole% and 72 mole% of ethylene glycol residues.

For these reasons, it cannot be concluded that the patent specification in itself, even if it were to be considered, may have provided any reasons to depart from the reading of claim 1 which would be made from the wording of that claim alone.

2.5 Therefore, applying the principle that a patent must be interpreted with a mind willing to understand, the

Board is of the opinion that the expression "wherein the polyester does not contain ethylene glycol" defines that the polyester otherwise defined in claim 1 of the main request should not contain residue of ethylene glycol and not that the polyester and/or the polyester composition being claimed should not contain free ethylene glycol.

3. Novelty

In the contested decision, the opposition division held that operative claim 1 lacked novelty over example 6 of D1a. In particular, it was considered that ethylene glycol was not present as free molecule in the polyester composition prepared in said example 6.

However, said conclusion was reached applying a reading of claim 1 which is not shared by the Board (see section 2 above).

During the appeal proceedings it was not contested that example 6 of D1a discloses a polyester composition comprising a polyester containing ethylene glycol residues (see D1a, page 12, table 2).

Thus, in view of the above reading of claim 1, the subject-matter of claim 1 of the main request is novel over D1a.

4. Remittal

- 4.1 The appellant requested that the case be remitted to the opposition division to deal with the question of inventive step.

4.2 According to the respondent, a remittal of the case would considerably prolong the legal uncertainty. In the interest of the public and in view of the fact that a substantial part of the patent term has already elapsed, the respondent requested that the case not be remitted to the department of first instance.

It was further pointed out that all arguments in view of inventive step had been exchanged. The Board was therefore in a position to take a final decision. Moreover there was no absolute right to have an issue decided on at two instances.

4.3 According to Article 11 RPBA 2020 the Board shall not remit the case to the department whose decision was appealed for further prosecution, unless special reasons present themselves for doing so. In the explanatory notes to Article 11 RPBA 2020 (see Supplementary publication 1, OJ EPO 2020, Annex 2, page 215) it is indicated that, as put forward by the respondent (letter of 22 August 2022, point 3), the aim of the new provision is to reduce the likelihood of a "ping-pong" effect between the Boards and the departments of first instance, and a consequent undue prolongation of the entire proceedings before the EPO. However, it is also specified therein that whether "special reasons" present themselves is to be decided on a case-by-case basis and that if all issues can be decided without an undue burden, a Board should normally not remit the case.

4.4 In the present case, the Board notes that the opposition division has not addressed the issue of inventive step in the decision. Also, the main request comprises two independent claims (claims 1 and 14) which are not explicitly and mandatorily interrelated,

in the sense that the process for preparing a polyester according to claim 14 is not limited to the preparation of polyesters that do not contain ethylene glycol as defined in claim 1. Therefore, the assessment of inventive step for each of these claims may differ and e.g. involve different distinguishing features and/or may require that different prior art documents have to be taken into account. Furthermore, in their rejoinder to the statement of grounds of appeal the respondent based their objection of lack of inventive step against claims 1 and 14 of the operative main request partly on the late filed documents D4 and D5 (rejoinder: section II.2.2.7 and section VI.2.3 in combination with section II.2.3.3), which were not examined on the merits by the opposition division with regard to inventive step (reference is made to the preliminary opinion of the opposition division, in which D4 and D5 were not taken into account since they were only filed by the opponent at a later stage). For these reasons, the Board is of the opinion that in the present case the assessment of the inventive step cannot be decided without undue burden.

- 4.5 The Board acknowledges that remitting the case to the opposition division entails a certain extension of the period of legal uncertainty in relation to the validity of the patent. However, not remitting the case to the opposition division would require the Board to perform the assessment of inventive step for each of claims 1 and 14 of the main request in both first- and last-instance proceedings and to effectively replace the opposition division rather than review the contested decision. This would be contrary to the primary object of the appeal proceedings to review the decision under appeal in a judicial manner (Article 12(2) RBPA 2020).

Although it is established case law that there is no absolute right for a party to have an issue decided upon by two instances (see Case Law of the Boards of Appeal, 10th edition, 2022, section V.A.9.6.1), it is also not the function of the Board to consider and decide upon issues which have not been examined at all by the opposition division. In addition, it is well recognised that any party may be given the opportunity of two readings of the important elements of a case. Hence, a case is normally referred back if essential questions regarding the patentability of the claimed subject-matter have not yet been examined and decided by the opposition division, which is the case here for the question of inventive step.

- 4.6 In view of the above and after having considered the circumstances of the present case, the Board is of the opinion that special reasons within the meaning of Article 11 RPBA 2020 present themselves. Therefore the Board judges it appropriate to remit the case to the opposition division for further prosecution according to Article 111(1) EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



B. ter Heijden

O. Dury

Decision electronically authenticated