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**Datasheet for the decision
of 15 July 2013**

Case Number: T 1713/08 - 3.3.03
Application Number: 95901252.7
Publication Number: 739368
IPC: C08G 63/08, C08L 67/04,
A61L 15/62, A61L 15/26
Language of the proceedings: EN

Title of invention:

Biodegradable copolymers and plastic articles comprising
biodegradable copolymers

Patent Proprietor:

Meredian, Inc.

Opponent:

Metabolix, Inc.

Headword:

-

Relevant legal provisions:

EPC Art. 123(2), 54, 111(1)

Keyword:

"Patent proprietor sole appellant after withdrawal of the
appeal by the opponent"
"Subject-matter of the auxiliary request found to be allowable
by the opposition division not open to scrutiny"
"Amendments allowable"
"Novelty (yes)"
"Remittal for remaining issues"

Decisions cited:

G 0009/92, G 0004/93, G 0001/99, T 0856/92, T 0149/02

Catchword:

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Case Number: T 1713/08 - 3.3.03

D E C I S I O N
of the Technical Board of Appeal 3.3.03
of 15 July 2013

Appellant: Meredian, Inc.
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Bainbridge, GA 39818 (US)

Representative: Cabinet Plasseraud
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Party as of right: Metabolix, Inc.
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Representative: Probert, Gareth David
Potter Clarkson LLP
The Belgrave Centre
Talbot Street
Nottingham NG1 5GG (GB)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
15 July 2008 concerning maintenance of the
European patent No. 739368 in amended form.

Composition of the Board:

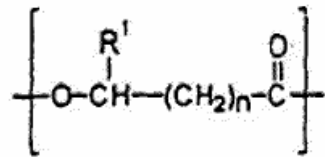
Chairman: B. ter Laan
Members: F. Rousseau
C.-P. Brandt

Summary of Facts and Submissions

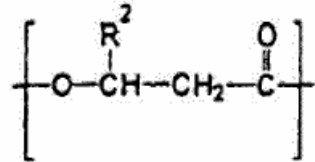
- I. The appeal by the Patent Proprietors filed on 4 September 2008 lies from the decision of the Opposition Division posted on 15 July 2008 according to which European patent No. 0 739 368 (application No. 95 901 252.7) as amended according to the documents of the Fifth Auxiliary Request submitted with letter of 4 September 2007 met the requirements of the EPC.
- II. A further appeal against said decision by the Opponents (now a party as of right under Article 107, second sentence, EPC) was withdrawn with letter of 6 July 2009.
- III. The Fifth Auxiliary Request underlying the impugned decision contained six claims, independent claims 1 and 6 of which read as follows:

"1. An absorbent article comprising:

- a) a liquid pervious topsheet;
- b) a liquid impervious backsheet comprising a biodegradable copolymer, characterized in that the biodegradable copolymer comprises at least two randomly repeating monomer units wherein the first randomly repeating monomer unit has the structure



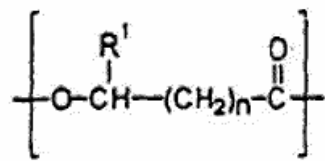
wherein R^1 is H, or C_1 or C_2 alkyl, and n is 1 or 2; the second randomly repeating monomer unit has the structure



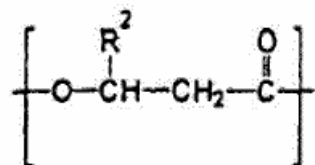
wherein R^2 is a C_4 - C_{19} alkyl or alkenyl; and wherein at least 50% of the randomly repeating monomer units have the structure of the first randomly repeating monomer unit; and

c) an absorbent core positioned between the topsheet and the backsheet.

6. A biodegradable copolymer comprising at least two randomly repeating monomer units characterized in that the first randomly repeating monomer unit has the structure



wherein R^1 is H, or C_1 or C_2 alkyl, and n is 1 or 2; the second randomly repeating monomer unit has the structure



wherein when R^1 is C_1 or C_2 and n is 1, R^2 is a C_{12} - C_{19} alkyl or alkenyl; when R^1 is C_1 or C_2 and n is 2,

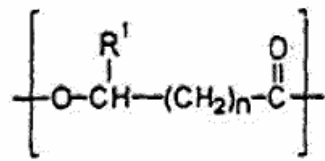
R² is a C₄-C₁₉ alkyl or alkenyl; and when R¹ is H and n is 1 or 2, R² a C₄-C₁₉ alkyl or alkenyl; and wherein at least 50% of the randomly repeating monomer units have the structure of the first randomly repeating monomer unit."

The dependent claims 2 to 5 were directed to preferred embodiments of claim 1.

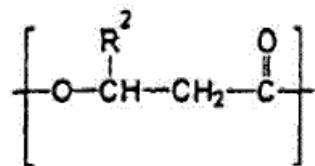
IV. The contested decision was also based on five further sets of claims, also submitted with the Patent Proprietors' letter of 4 September 2007, the respective independent claims 1 of which read as follows:

Main, First and Second Auxiliary Requests

"1. A plastic article comprising a biodegradable copolymer, characterized in that the biodegradable copolymer comprises at least two randomly repeating monomer units wherein the first randomly repeating monomer unit has the structure:



wherein R¹ is H, or C₁ or C₂ alkyl, and n is 1 or 2; the second randomly repeating monomer unit has the structure

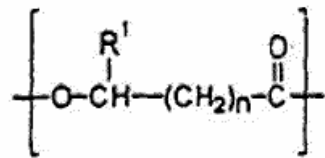


wherein R² is a C₄-C₁₉ alkyl or alkenyl; and wherein at least 50% of the randomly repeating monomer

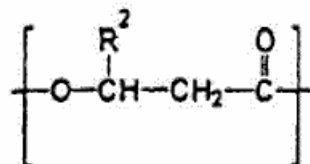
units have the structure of the first randomly repeating monomer unit".

Third and Fourth Auxiliary Requests (compared to claim 1 of the Main Request, the deletions made are indicated in strikethrough):

- "1. A plastic article comprising a biodegradable copolymer, characterized in that the biodegradable copolymer comprises at least two randomly repeating monomer units wherein the first randomly repeating monomer unit has the structure:



wherein R^1 is ~~H, or~~ C_1 ~~or~~ C_2 alkyl, and n is ~~1 or~~ 2; the second randomly repeating monomer unit has the structure



wherein R^2 is a C_4 - C_{19} alkyl or alkenyl; and wherein at least 50% of the randomly repeating monomer units have the structure of the first randomly repeating monomer unit".

- V. A notice of opposition had been filed against the granted patent requesting revocation of the patent in its entirety on the grounds of lack of novelty and lack of inventive step (Article 100(a) EPC) and extension of the subject-matter beyond the content of the application as filed (Article 100(c) EPC). *Inter alia*

the following documents were mentioned in the impugned decision:

- D3: G. Huisman *et al.*, Applied and Environmental Microbiology, Vol. 55, No. 8, Aug. 1989, pages 1949-1954,
- D4: H. Brandl *et al.*, Int. J. Biol. Macromol., 1989, Vol. 11, February, pages 49-55,
- D9: US-A-4 880 592
- D15: H. Preusting *et al.*, Journal of Environmental Polymer Degradation, Vol. 1, No. 1, 1993, pages 11-21.
- D16: N. Mantzaris *et al.*, AIChE Journal, Mar 2001, Vol. 47, No. 3, 727-743,
- D17: N. Kamiya *et al.*, Macromolecules, 1989, 22, 1676-1682,
- D21: Declaration of Prof. S. P. McCarthy
- D24: E. Y. Lee *et al.* Appl. Microbiol. Biotechnol. (1995), 42, 901-909,
- D27a: M. Kato, *et al.* Biosynthesis of Polyester Blends by *Pseudomonas* sp. 61-3 from Alkanoic Acids, Bull. Chem. Soc. Jpn., 69, 515-520 (1996),
- D27b: Declaration of Prof. A. Steinbüchel.

VI. According to the decision under appeal, both documents D3 and D4 disclosed the synthesis by specific bacteria of copolymers meeting the definition given in claim 1 of the Main, First and Second Auxiliary Requests. As for these syntheses the bacteria were grown on one substrate only, the copolymers produced had to be random, which also followed from declarations D21 and D27b. Thus, mixtures of homo/copolymers or block copolymers were not expected to be obtained. Counter arguments provided by the Patent Proprietors on the

basis of documents D15 to D17, D24 or D27a failed to convince as they concerned a context different from that underlying D3 or D4, such as switching substrates. The Opposition Division also held that solutions of those copolymers in chloroform as disclosed in either of D3 and D4 fulfilled the definition of an adhesive as given in the patent in suit. Hence, claim 1 of the Main, First and Second Auxiliary Requests lacked novelty over D3 and D4.

Despite the amendments to the formula defining the copolymer in Claim 1, Claim 1 of the Third and Fourth Auxiliary Requests still encompassed the copolymers disclosed in D3, so that amended Claim 1 according to the Third and Fourth Auxiliary Requests also lacked novelty over that document.

As regards the Fifth Auxiliary Request, novelty was given and an inventive step acknowledged vis-à-vis the closest prior art constituted by D9 which related to the use of polyhydroxyalkanoates in a diaper back sheet.

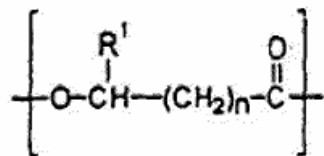
VII. With their statement setting out the grounds of appeal submitted on 25 November 2008, the Patent Proprietors requested that the decision under appeal be set aside for substantial procedural violations, the appeal fee be reimbursed and the case be remitted to an opposition division in a different composition, on the basis of the patent as granted (Main Request) for fresh examination, or, alternatively, on the basis of any of the First to Sixth Auxiliary Requests as submitted with the statement setting out the grounds of appeal.

- VIII. In a communication of 21 March 2013 sent in preparation to the oral proceedings scheduled to take place on 24 May 2013, the Board expressed the preliminary opinion that the conduct of the Opposition Division had not been shown to amount to a substantial procedural violation which would justify the reimbursement of the appeal fee and the remittal of the case to the first instance. The Board also indicated that the amendments contained in the claims according to the then pending First Auxiliary Request appeared to overcome the objections for lack of novelty over D3 and D4.
- IX. The party as of right, following their letter of 6 July 2009 in which they had announced that they withdrew their request for oral proceedings, indicated with letter of 24 April 2013 that they would not be attending the oral proceedings.
- X. In response to the Board's communication, further submissions were made by the Appellants with letters of 24 April 2013 and 15 May 2013. The Appellants in particular did not maintain that substantial procedural violations had occurred. They withdrew their request for reimbursement of the appeal fee and for remittal of the case to the first instance for procedural violation. Although stating that they disagreed with the alleged lack of novelty of the Main Request, the latter was withdrawn, the First Auxiliary Request submitted with their statement setting out the grounds of appeal being promoted as their new Main Request. Remittal of the case to the first instance to take a decision on inventive step was also requested. In case the Board could allow those requests, the request for oral proceedings was withdrawn.

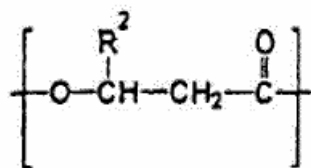
XI. The oral proceedings were cancelled with letter of 17 May 2013.

XII. The present Main Request consists of twelve claims, namely independent claims 1 and 11, and their respective dependent claims 2 to 4 and 12, as well as claims 5 to 10, the subject-matter of which is identical to that of claims 1 to 6 constituting the claims of the Fifth Auxiliary Request underlying the impugned decision. Claims 1 to 4, 11 and 12 of the Main Request read as follows (the deletions made compared to the claims as granted being indicated in ~~striketrough~~ and the additions in **bold and underlined**):

"1. A plastic article comprising a biodegradable copolymer, characterized in that the biodegradable copolymer comprises at least two randomly repeating monomer units wherein the first randomly repeating monomer unit has the structure:



wherein R¹ is H, or C₁ or C₂ alkyl, and n is 1 or 2; the second randomly repeating monomer unit has the structure



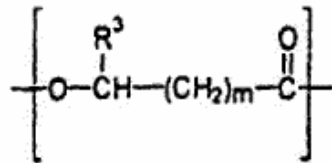
wherein R² is a C₄-C₁₉ alkyl or alkenyl; and wherein at least 50% of the randomly repeating monomer units have the structure of the first randomly

repeating monomer unit, wherein the plastic article is a film, sheet, fiber, foam, molded article, or nonwoven fabric.

~~32.~~ The plastic article of Claim ~~12~~, characterized in that R¹ is a C₁ or C₂ alkyl and n is 1.

~~43.~~ The plastic article of Claim ~~12~~, characterized in that R₁ is H and n is 2.

~~54.~~ The plastic article of Claim ~~12~~, characterized in that the copolymer comprises one or more additional randomly repeating monomer units having the structure



wherein R³ is H, or a C₁-C₁₉ alkyl or alkenyl; and m is 1 or 2; and wherein the additional randomly repeating monomer units are not the same as the first randomly repeating monomer unit or the second randomly repeating monomer unit."

~~1311.~~ A bag characterized in that it comprises the film of any of Claims ~~2-41-3~~.

~~1412.~~ A shrink-wrap characterized in that it comprises the film of any of Claims ~~2-41-3~~."

XIII. The Appellants requested that the decision under appeal be set aside and that the case be remitted to the first instance to decide on inventive step.

Reasons for the Decision

1. The appeal by the Patent Proprietors is admissible.

Extent of scrutiny

2. After having withdrawn their appeal with letter of 6 July 2009, the Opponents remain party to the proceedings as of right under Article 107, second sentence, EPC. The Patent Proprietors are therefore the sole appellant in the present appeal proceedings.
3. Independent Claim 5 together with Claims 6 to 9 dependent on Claim 5 and independent Claim 10 of the present Main Request are, apart from their necessary renumbering, identical to Claims 1 to 6 of the Fifth Auxiliary Request before the Opposition Division on the basis of which it was decided that the patent could be upheld in amended form. The existence in the present Main Request of additional independent Claims 1 and 11, as well as their dependent Claims 2 to 4 and 12, respectively, along with Claims 5 to 10 does not result in the subject-matter of Claims 5 to 10 to be put in a different light, giving them a different meaning.
4. In decisions G 9/92 and G 4/93 (OJ EPO 1994, 875; confirmed in G 1/99, OJ EPO 2001, 381, point 4.1), the Enlarged Board of Appeal had decided that in cases where the patent proprietor is the sole appellant, neither the Board of Appeal, nor the non-appealing opponent as a party to the proceedings as of right under Article 107, second sentence, EPC, may challenge the maintenance of the patent as amended in accordance

with the interlocutory decision (principle of prohibition of *reformatio in peius*). Hence, in application of that principle and considering that the meaning of Claims 5 to 10 of the Main Request has not been changed by virtue of the insertion of additional Claims 1-4, 11 and 12, the Board has no power to consider the validity of Claims 5 to 10 of the Main Request, in line with decisions T 856/92 (8 February 1995) and T 149/02 (25 July 2003).

5. Consequently, the claims of the Main Request open to scrutiny by the Board are Claims 1 to 4, 11 and 12.

Amendments

6. The party as of right did not raise formal objections to the amended claims. The Board has no reason to take a different position. Claim 1 of the Main Request corresponds to the subject-matter of Claim 2 as originally filed and as granted, wherein the definition of the plastic articles does not include elastomers or adhesives anymore, and is therefore restricted now to films, sheets, fibers, foams, moulded articles or nonwoven fabrics. The wording of dependent Claims 2 to 4 corresponds to that of Claims 3 to 5 as originally filed and as granted and, by reference to Claim 1, dependent Claims 2 to 4 contain the same restriction as indicated above. Apart from the necessary renumbering, the subject-matter of Claims 11 and 12 corresponds to that of Claims 12 and 13 as originally filed or of Claims 13 and 14 as granted, respectively. Thus, Claims 1 to 4, 11 and 12 satisfy the requirements of Article 123, paragraphs (2) and (3), EPC.

Novelty

7. In the communication of 21 March 2013 the Board indicated the preliminary opinion that the copolymer defined in present Claim 1 could not be distinguished from those disclosed by D3 and D4. Those documents, however, do not disclose a film, a sheet, a fibre, a foam, a moulded article or a nonwoven fabric comprising those copolymers. This was not contested by the party as of right. Consequently, the novelty of Claim 1 and its dependent Claims 2 to 4, as well as that of Claims 11 and 12 which refer to Claim 1 for the definition of the film they comprise, is given.

Remittal

8. Since the opposition division has not yet ruled on the ground for opposition for lack of inventive step, in so far as the subject-matter of Claims 1 to 4, 11 and 12 is concerned, and the sole Appellant has requested the case to be remitted to the first instance to decide on inventive step, the Board considers it appropriate in the circumstances of the present case to exercise its power under Article 111(1) EPC, to remit the case to the Opposition Division for deciding on the remaining issues in respect of the subject-matter of Claims 1 to 4, 11 and 12.

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 Claims 1 to 12 according to the main request submitted with letter of 24 April 2013, Claims 1 to 4, 11 and 12 being the sole claims open to scrutiny.

The Registrar

The Chairman

E. Goergmaier

B. ter Laan