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**D E C I S I O N**  
**of 20 December 1999**

**Case Number:** T 0953/98 - 3.3.5

**Application Number:** 92909214.6

**Publication Number:** 0530358

**IPC:** C02F 5/12

**Language of the proceedings:** EN

**Title of invention:**

Polyaspartic acid as a calcium carbonate and a calcium phosphate inhibitor

**Patentee:**

Donlar Corporation

**Opponent:**

Bayer AG, Leverkusen Konzernverwaltung RP Patente Konzern

**Headword:**

Polyaspartic acid/DONLAR

**Relevant legal provisions:**

EPC Art. 83, 111(1)

**Keyword:**

"Sufficiency of disclosure - yes, remittal"

**Decisions cited:**

G 0010/91

**Catchword:**

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Boards of Appeal

Chambres de recours

**Case Number:** T 0953/98 - 3.3.5

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.5**  
**of 20 December 1999**

**Appellant:** Donlar Corporation  
(Proprietor of the patent) 6502 South Archer Avenue  
Bedford Park  
IL 60501 (US)

**Representative:** Vossius, Volker, Dr.  
Dr. Volker Vossius  
Patentanwaltskanzlei  
Rechtsanwaltskanzlei  
Holbeinstrasse 5  
81679 München (DE)

**Respondent:** Bayer AG, Leverkusen  
(Opponent) Konzernverwaltung RP  
Patente Konzern  
Bayerwerk  
51368 Leverkusen (DE)

**Representative:** Zobel, Manfred, Dr.  
Bayer AG  
Konzernbereich RP  
Patente und Lizenzen  
51368 Leverkusen (DE)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 15 July 1998  
revoking European patent No. 0 530 358 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** R. K. Spangenberg  
**Members:** G. J. Wassenaar  
J. H. van Moer

## Summary of Facts and Submissions

- I. The appeal is from the decision of the Opposition Division to revoke European patent No. 0 530 358, which was granted in response to European patent application No. 92 909 214.6, which was based on the international application PCT/US92/02215, published under number WO 92/16462.
- II. The decision under appeal was based on four sets of amended claims according to a main request and auxiliary requests 1 to 3, filed on 25 June 1998 during oral proceedings. The main request was refused on the ground that the subject matter of claim 1 thereof was insufficiently disclosed (Article 100(b) EPC). The insufficiency objection related to insufficiencies in the calcium phosphate inhibition test as defined in claim 1 then on file, concerning a method of inhibiting the precipitation in an aqueous system of calcium carbonate or calcium phosphate comprising the treatment of the aqueous system with a specific polyaspartic acid. The first auxiliary request was refused on the ground that claim 1 thereof was extended beyond the protection conferred (Article 123(3)EPC). Auxiliary requests 2 and 3 were refused on the ground that claim 1 thereof was amended in such a way that it contained subject-matter which extended beyond the content of the application as filed (Article 123(2)EPC).
- III. With the statement of grounds of appeal, the appellant submitted two sets of amended claims 1 to 5 as main and auxiliary request. Later in the proceedings the first claims of these sets were again amended.

Claim 1 of the main request dated 8 January 1999 reads as follows:

"A polyaspartic acid composition having a weight average molecular weight (Mw) within the range of 1,000 to 5,000 as determined by gel permeation chromatography using polyacrylic acid standards of Mw 2000 and 4500 and having 65 to 80%  $\beta$ -form and 20 to 35%  $\alpha$ -form, obtainable by

- (a) heating powdered L-aspartic acid to at least 188°C (370°F) to initiate a condensation reaction, then
- (b) raising the reaction temperature to at least 216°C (420°F),
- (c) maintaining the temperature at at least 216°C (420°F) until at least 80% conversion to polysuccinimide has occurred, and
- (d) hydrolyzing the polysuccinimide with a base until the pH has been raised to 9.5 and a clear solution has been formed."

IV. The respondent did not raise any objections to the amended claims filed at the appeal stage. With the letter dated 27 April 1999 the respondent withdrew the opposition.

V. The appellant (patentee) requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the claims according to the main request or auxiliary request dated 8 January 1999, filed with the letter of the same date.

## Reasons for the Decision

1. The appeal is admissible.

2. *Main request*

2.1 Amendments (Article 123 EPC)

Claims 1 to 5 are based on claims 6 to 10 as granted with the amendments in claims 1 and 4 that in step (d) the polysuccinimide is hydrolysed with a base until the pH has been raised to 9.5 and a clear solution has been formed, and the amendment in claim 1 that the molecular weight is determined by gel permeation chromatography using polyacrylic acid standards of Mw 2000 and Mw 4500. The amendment in step (d) is based on page 3, lines 55 to 56 of the patent in suit and has been disclosed on page 5, lines 24 to 26 of the original PCT application. The amendment concerning the molecular weight measurement is based on page 5, lines 47 to 51 of the patent in suit and has been disclosed in the original PCT application page 10, lines 1 to 11. The amendments limit the scope of the corresponding claims as granted. The amendments are therefore in agreement with the requirements of Article 123 EPC.

2.2 Sufficiency of disclosure (Article 83 EPC)

The insufficiency objection in the contested decision related to a test used to define a polyaspartic acid suitable as a precipitation inhibitor. In the present claims the polyaspartic acid is defined in agreement with claim 6 as granted, independent from such a test.

The insufficiency objection therefore does not apply to the present claims. The Board has no doubt that the compositions now claimed can be obtained by a person skilled in the art so that the requirements of Article 83 EPC are fulfilled.

### 2.3 Novelty

Present claims 1 to 5 are based on claims 6 to 10 as granted. Since novelty of claims 6 to 10 as granted has never been at issue in the opposition proceedings, the Board has no power to examine the novelty of present claims 1 to 5; cf G 10/91.

### 2.4 Inventive step

The issue of inventive step of the subject matter of present claims 1 to 5 has never been treated neither in the decision under appeal nor in a previous communication of the Opposition Division. According to the minutes this issue was also not discussed during oral proceedings before the Opposition Division. Under these circumstances the Board does not consider it appropriate to decide this issue at this stage of the procedure and uses its power under Article 111(1)EPC to remit the case to the Opposition Division for further prosecution.

**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:

S. Hue

R. Spangenberg