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**Datasheet for the decision  
of 7 July 2015**

**Case Number:** T 0339/12 - 3.3.03  
**Application Number:** 05004711.7  
**Publication Number:** 1574538  
**IPC:** C08G63/185, C08G63/183,  
B65D1/02  
**Language of the proceedings:** EN

**Title of invention:**

Polyester polymer particles having a small surface to center  
viscosity gradient

**Patent Proprietor:**

GRUPO PETROTEMEX, S.A. DE C.V.

**Opponents:**

Technip Zimmer GmbH  
Uhde Inventa-Fischer GmbH

**Headword:**

**Relevant legal provisions:**

EPC Art. 123(2)  
RPBA Art. 13(1), 13(3)

**Keyword:**

Amendments -  
extension beyond the content of the application as filed  
(main request and auxiliary request: yes)  
Late-filed auxiliary request -  
justification for late filing (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
Boards of Appeal  
Chambres de recours**

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Case Number: T 0339/12 - 3.3.03

**D E C I S I O N  
of Technical Board of Appeal 3.3.03  
of 7 July 2015**

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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
31 January 2012 concerning maintenance of the  
European Patent No. 1574538 in amended form.**

**Composition of the Board:**

**Chairman**            B. ter Laan  
**Members:**            O. Dury  
                             R. Cramer

## Summary of Facts and Submissions

I. The appeal by opponent 1 lies against the interlocutory decision of the opposition division maintaining in amended form European patent No. EP 1 574 538, based on application No. 05 004 711.7.

II. The claims of the application as filed relevant for the present decision read as follows:

"1. A polyester polymer particle comprising a polyester polymer comprising:

(a) a carboxylic acid component comprising at least 90 mole% of the residues of terephthalic acid, derivatives of terephthalic acid, naphthalene-2,6-dicarboxylic acid, derivatives of naphthalene-2,6-dicarboxylic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 90 mole% of the residues of ethylene glycol,

based on 100 mole percent of the carboxylic acid component residues and 100 mole percent hydroxyl component residues in the polyester polymer, wherein said particle has an intrinsic viscosity of at least 0.70 dL/g, and the intrinsic viscosity at the surface of the particle is less than 0.25 dL/g higher than the intrinsic viscosity at the center of the particle."

"2. The particle of claim 1, wherein the particle has an intrinsic viscosity of at least 0.74 dL/g, or of at least 0.77 dL/g."

"4. The particle of any of claims 1-3, wherein the particle has a degree of crystallinity of at least

25%."

"5. The particle of any of claims 1-4, wherein the particle contains less than 10 ppm acetaldehyde."

"8. The polyester particle of claim 1, wherein the polyester polymer contains at least:

(a) a carboxylic acid component comprising at least 92 mole% of the residues of terephthalic acid, or derivatives of terephthalic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 92 mole% of the residues of ethylene glycol,

based on 100 mole percent of the carboxylic acid component residues and 100 mole percent hydroxyl component residues in the polyester polymer."

"17. A polyester particle having a degree of crystallinity of at least 25% and an intrinsic viscosity of at least 0.70 dL/g, said particle having an intrinsic viscosity at its surface and an intrinsic viscosity at its center, wherein the intrinsic viscosity at the surface of the particle is less than 0.25 dL/g higher than the intrinsic viscosity at the center of the particle."

"18. The polyester particle of claim 17, wherein the polyester polymer contains:

(a) a carboxylic acid component comprising at least 90 mole% of the residues of terephthalic acid, or derivatives of terephthalic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 90 mole% of the residues of ethylene glycol,

based on 100 mole percent of the carboxylic acid residues and 100 mole percent hydroxyl residues in the polyester polymer."

"19. The polyester particle of claim 18, wherein the degree of crystallinity is at least 35%, and the intrinsic viscosity of the particle is at least 0.74 dL/g."

"21. A blow molded container obtained from the polyester particles of any of claims 1-14 or 17-20 having an degree of crystallinity of at least 35%, and an intrinsic viscosity of at least 0.77 dL/g, said blow molded container obtained without increasing the molecular weight of the pellets by solid state polymerization."

"22. A process for making a container from a polyester polymer, comprising feeding polyester particles having a degree of crystallinity of at least 15% and an intrinsic viscosity of at least 0.70 dL/g to an extrusion zone, melting the particles in the extrusion zone to form a molten polyester polymer composition, and forming a sheet or a molded part from extruded molten polyester polymer, wherein the polyester particles fed to the extrusion zone have an intrinsic viscosity at their surface which is less than 0.25 dL/g higher than the intrinsic viscosity at their center."

"23. The process of claim 22, wherein the intrinsic viscosity at the surface of the particles is less than 0.20 dL/g higher than the intrinsic viscosity at the

center of the particles, or wherein the difference between the intrinsic viscosity of the particles at their surface and their center is 0.10 dL/g or less, or wherein the difference is 0.05 dL/g or less."

"27. The process of claim 23, comprising drying the particles in a drying zone at temperature of at least 140°C before melting the particles in the extrusion zone."

"30. The process of any one of claims 22-29, wherein the polyester polymer particles comprise:

(a) a carboxylic acid component comprising at least 90 mole% of the residues of terephthalic acid, or derivatives of terephthalic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 90 mole% of the residues of ethylene glycol,

based on 100 mole percent of the carboxylic acid component residues and 100 mole percent hydroxyl component residues in the polyester polymer, and at least 75% of the polyester polymer is virgin polymer."

"31. The process of claim 30, wherein the polyester polymer particles comprises:

(a) a carboxylic acid component comprising at least 92 mole% of the residues of terephthalic acid, or derivatives of terephthalic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 92 mole% of the residues of ethylene glycol,



based on 100 mole percent of the carboxylic acid component residues and 100 mole percent hydroxyl component residues in the polyester polymer."

"32. The process of claim 31, wherein the degree of crystallinity is at least 25%, preferably at least 35%."

"37. Polyester particles having a particle weight of greater than 1.0 g per 100 particles and less than 100 g per 100 particles, said particles, comprising at least 75% virgin polyester polymer, comprising:

(a) a carboxylic acid component comprising at least 90 mole% of the residues of terephthalic acid, or derivatives of terephthalic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 90 mole% of the residues of ethylene glycol,

based on 100 mole percent of the carboxylic acid component residues and 100 mole percent hydroxyl component residues in the polyester polymer, the particles having a degree of crystallinity of at least 25%, an intrinsic viscosity of at least 0.77 dL/g, an intrinsic viscosity at their surface and an intrinsic viscosity at their center wherein the intrinsic viscosity at the surface of the particles is not greater than 0.15 dL/g higher than the intrinsic viscosity at the center of the particles, and having an acetaldehyde level of 10 ppm or less."

Page 12, lines 15-31 of the application as filed further read as follows:

"There is also provided a process for making a polyester container, preferably a preform or beverage bottle, comprising feeding crystallized polyester particles having an intrinsic viscosity of at least 0.70 dL/g, to an extrusion zone, melting the particles in the extrusion zone to form a molten polyester polymer composition, and forming a sheet or a molded part from extruded molten polyester polymer, wherein the polyester particles have an It.V., a surface, and a center, (and at least a portion of the polyester particles, preferably all the particles, have an intrinsic viscosity at their surface which does not vary from their intrinsic viscosity at their center by more than 0.25 dL/g, preferably by no more than 0.20 dL/g. The particles fed to the extrusion zone are preferably dried. The particles desirably have sufficient crystallinity to prevent them from sticking to each other and/or equipment during drying at a temperature ranging from 140°C to 180°C. Moreover, the crystallized polyester particles fed to the extrusion zone after drying preferably contain low levels of acetaldehyde (as measured by the French National Standard Test), such as 10 ppm or less, or 5 ppm or less, or even 2 ppm or less. The sheet or molded part can be further processed to make thermoformed or blowmolded containers."

- III. Two oppositions against the patent were filed, in which the revocation of the patent was requested on the grounds of Art. 100 a) EPC (lack of novelty and lack of an inventive step) and Art. 100 b) EPC.
  
- IV. With the decision under appeal the patent was maintained on the basis of auxiliary request 2 filed during the oral proceedings, the relevant claims of

which read as follows (in claims 1, 10, 11 and 15 additions as compared to claim 1, 22, 23 and 27, respectively, of the application as filed are indicated in **bold**, deletions in ~~striketrough~~):

"1. A polyester polymer particle comprising a polyester polymer comprising:

(a) a carboxylic acid component comprising at least 90 mole% of the residues of terephthalic acid, derivates of terephthalic acid, naphthalene-2,6-dicarboxylic acid, derivatives of naphthalene-2,6-dicarboxylic acid, or mixtures thereof, and

(b) a hydroxyl component comprising at least 90 mole% of the residues of ethylene glycol,

based on 100 mole percent of the carboxylic acid component residues and 100 mole percent hydroxyl component residues in the polyester polymer, wherein said particle has an intrinsic viscosity of at least 0.70 dL/g, and the intrinsic viscosity at the surface of the particle is less than 0.25 dL/g higher than the intrinsic viscosity at the center of the particle,

**the "surface" being the outer 8 - 12% by mass, while the "center" being the inner 8 - 16% by mass of the particle around the particle center point, and**

**wherein the particle has not been subjected to an increase in its molecular weight in the solid state,**

**wherein the particle has a degree of crystallinity of at least 35%, and**

**wherein the particle contains less than 5 ppm acetaldehyde."**

(in the present decision, each of the added features is presented separately by the Board to facilitate the reading)

"10. A process for making a container from a polyester polymer, comprising feeding polyester particles having a degree of crystallinity of at least ~~15%~~ **35%** and an intrinsic viscosity of at least 0.70 dL/g to an extrusion zone, melting the particles in the extrusion zone to form a molten polyester polymer composition, and forming a sheet or a molded part from extruded molten polyester polymer, wherein the polyester particles fed to the extrusion zone have an intrinsic viscosity at their surface which is less than 0.25 dL/g higher than the intrinsic viscosity at their center,

**the "surface" being the outer 8 - 12% by mass, while the "center" being the inner 8 - 16% by mass of the particle around the particle center point, and**

**wherein the particle has not been subjected to an increase in its molecular weight in the solid state, and**

**wherein the particle contains less than 5 ppm acetaldehyde."**

"11. The process of claim ~~22~~ **10**, wherein the intrinsic viscosity at the surface of the particles is less than 0.20 dL/g higher than the intrinsic viscosity at the center of the particles, or wherein the difference between the intrinsic viscosity of the particles at their surface and their center is 0.10 dL/g or less, or

wherein the difference is 0.05 dL/g or less."

"15. The process of claim ~~23~~ **11**, comprising drying the particles in a drying zone at temperature of at least 140°C before melting the particles in the extrusion zone."

V. The decision under appeal was based, *inter alia*, on the following documents:

D1: EP-B1-0 842 210

D7: US 4 064 112

According to that decision, auxiliary request 2 was held to fulfil the requirements of Art. 123(2), 83, 54 and 56 EPC.

VI. Opponent 1 (the appellant) lodged an appeal against the above decision and requested that the patent be revoked. Arguments in respect of lack of novelty and lack of an inventive step were submitted in the statement setting out the grounds for the appeal. Additional arguments, including a new objection pursuant to Art. 123 (2) EPC, were filed with letter of 19 September 2014.

VII. Opponent 2 withdrew its opposition by letter dated 20 November 2014.

VIII. With its rejoinder to the statement of grounds of appeal the patent proprietor (respondent) requested that the appeal be dismissed.

IX. The parties were summoned to oral proceedings. In a communication dated 27 May 2015 setting out the Board's preliminary view of the case, the parties were in

particular informed that the respondent had not yet replied to the appellant's objection under Art. 123 (2) EPC so that the basis for the claimed subject-matter might have to be discussed.

X. With a letter of 8 June 2015 the respondent submitted further arguments, also in respect of Art. 123 (2) EPC.

XI. During the oral proceedings, which were held on 7 July 2015 in the presence of both parties, the respondent filed an auxiliary request comprising the following claim (additions as compared to claim 22 of the application as filed are indicated in **bold**, deletions in ~~strikethrough~~):

"1. A process for making a container from a polyester polymer, comprising feeding polyester particles having a degree of crystallinity of at least ~~15%~~ **35%** and an intrinsic viscosity of at least 0.70 dL/g to an extrusion zone, melting the particles in the extrusion zone to form a molten polyester polymer composition, and forming a sheet or a molded part from extruded molten polyester polymer, wherein the polyester particles fed to the extrusion zone have an intrinsic viscosity at their surface which is less than 0.25 dL/g higher than the intrinsic viscosity at their center,

**the "surface" being the outer 8 - 12% by mass, while the "center" being the inner 8 - 16% by mass of the particle around the particle center point, and**

**wherein the particle has not been subjected to an increase in its molecular weight in the solid state, and**

**wherein the particle contains less than 5 ppm**

**acetaldehyde,**

**wherein the difference between the intrinsic viscosity of the particles at their surface and their center is 0.05 dL/g or less,**

**the process comprising drying the particles in a drying zone at temperature of at least 140°C before melting the particles in the extrusion zone."**

XII. The appellant's arguments, as far as relevant for the present decision, may be summarised as follows:

**Main request**

- a) No support could be found in the application as filed for the combination of features related to intrinsic viscosity, acetaldehyde content and crystallinity now being defined in claim 1, in particular not in original claims 4, 5 and 19. The process disclosed on page 12, lines 15-31 of the application as filed was not directed to particles as claimed and further contained a limitation in terms of a drying step, which was not reflected in claim 1. Also, no specific level of crystallinity was mentioned in said paragraph. In that respect, although it was indicated in the application as filed that sufficient crystallinity was desirable to prevent stickiness, the skilled person knew that a degree of crystallinity of 25% was sufficient and the application as filed contained no motivation for using particles of higher crystallinity. More importantly, the difference between the intrinsic viscosity at the surface and the center of the particle specified in the process of page 12 was not defined in the same

manner as in claim 1 of the main request.

- b) For those reasons, the main request did not fulfil the requirements of Art. 123(2) EPC.

**Auxiliary request**

- c) The auxiliary request was not clearly allowable pursuant to Art. 123(2) EPC. Therefore, it should not be admitted to the proceedings.
- d) As with the main request, the application as filed did not provide a basis for the combination of features now being defined in claim 1. In that respect, claim 1 did in particular not contain the limitation of a maximum temperature of 180°C for the drying step as stipulated on page 12, lines 15-31 of the application as filed. Also, the fact that the particle should not be subjected to an increase in its molecular weight in the solid state amounted to a further selection of a feature disclosed separately in the application as filed.
- e) Therefore, the auxiliary request did not fulfil the requirements of Art. 123 (2) EPC.

XIII. The respondent's arguments, as far as relevant for the present decision, may be summarised as follows:

**Main request**

- a) Claim 1 was derivable from claim 5 together with the paragraph on page 12, lines 15-31 of the application as filed in which the acetaldehyde content of 5 ppm was in particular disclosed. In that respect, the sentence directed to the



acetaldehyde content should be read independently from the rest of the paragraph. It was further derivable from the application as filed that the invention did not lie in the acetaldehyde level but in the intrinsic viscosity gradient. Therefore, the skilled person would understand that the feature related to an acetaldehyde level of 5 ppm or less applied to all embodiments of the application as filed.

The paragraph on page 12, lines 15-31 of the application as filed, although primarily directed to a process, also defined particles to be used in that process. Original claims 1, 4 and 5 provided the skeleton for combining various ranges of intrinsic viscosity, crystallinity and acetaldehyde content. Original claim 37 provided a further basis for particles characterised in terms of intrinsic viscosity, intrinsic viscosity gradient, acetaldehyde content and crystallinity. Therefore, not only did the application as filed disclose the specific values of those parameters as defined in claim 1 but it also contained several pointers to the combination of those parameters as specified in claim 1.

- b) For those reasons, the main request fulfilled the requirements of Art. 123 (2) EPC.

**Auxiliary request**

- c) The respondent should be given a chance to reply to the complete objection pursuant to Art. 123(2) EPC, which was only brought forward during the oral proceedings before the Board. In that respect, considering that the claims of the

auxiliary request were based on a combination of claims already present in the main request, the appellant was not taken by surprise. The auxiliary request further constituted a fair attempt to deal with the objections retained by the Board. For those reasons, the auxiliary request should be admitted to the proceedings.

- d) Claim 1 was based on the combination of original claims 22, 23 and 27 with the same passages of the application as filed as identified for the main request. In particular, claim 1 comprised all the features of the process described on page 12, lines 15-31 of the application as filed. In addition, it was clear from the whole application as filed that the particles used in the process should not have experienced solid state polymerisation i.e. no increase in molecular weight in the solid state. Therefore, that feature was disclosed in general terms so that it applied to all the embodiments of the application as filed.
- e) Consequently, the auxiliary request fulfilled the requirements of Art. 123 (2) EPC.

XIV. The appellant (opponent 1) requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent requested that the appeal be dismissed, or alternatively that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the auxiliary request filed during the oral proceedings.

## Reasons for the Decision

### Main request - Art. 123(2) EPC

1. Since the appellant's objection pursuant to Art. 123(2) EPC was raised for the first time after the statement of grounds of appeal had been filed, its admission to the proceedings is subject to the Board's discretion (Art. 13 (1) RPBA).

In the absence of any request from the respondent not to admit said objection and further considering that the respondent has had ample time to deal with it, which he did both in writing and during the oral proceedings before the Board, the Board saw no reason not to admit that objection to the proceedings, which appeared *prima facie* highly relevant.

2. Claim 1 corresponds to claim 1 as originally filed with the following amendments:
  - a) definition of the surface and center in % by mass;
  - b) addition of the feature "wherein the particle has not been subjected to an increase in its molecular weight in the solid state";
  - c) addition of the degree of crystallinity of at least 35%;
  - d) addition of the acetaldehyde content of less than 5 ppm.
- 2.1 Amendment a) is disclosed on page 10, lines 15-16 of the application as filed. That passage constitutes a

general definition of the terms "surface of the particle" and "center of the particle" in the sense of the application as filed and is considered to be applicable to any embodiment of the application as filed.

- 2.2 Amendment b) is disclosed on page 9, lines 10-12 and on page 11, lines 25-27 of the application as filed. However, both passages are limited to particles "fed to an injection molding machine" or to an "extruder for molding sheets or preforms", which represent specific applications among other ones contemplated by the application as filed (see e.g. page 25, lines 5-12 and page 26, lines 1-9). Besides, according to both passages the polyester particles are "desirably" and "preferred" not subjected to an increase in molecular weight in the solid state. Therefore, those passages are directed to specific embodiments, which are not reflected in the wording of claim 1. Consequently, amendment b) is directed to a specific embodiment which was not disclosed in the application as filed at the level of generality of present claim 1.

- 2.3 Regarding amendment c), different degrees of crystallinity varying from "at least 15%" to "at least 40%", including the specific range of "at least 35%", are specified on page 22, lines 16-18 of the application as filed. That passage is also indicated as being directed to optional embodiments ("desirable").

A degree of crystallinity of "at least 35%" is further mentioned in original claims 19, 21 and 32, however always in combination with other features that are not reflected in claim 1 (intrinsic viscosity of at least 0.74 dL/g or at least 0.77 dL/g in claims 19 and 21, respectively; polyesters comprising amounts of more

specific carboxylic acid components in claim 19; polyesters comprising at least 75 % virgin polyester and amounts of more specific carboxylic acid components of at least 92 mole% in claim 32). Therefore, those passages cannot constitute a basis for amendment c) at the present level of generality.

For those reasons, amendment c) may only be seen as a selection within the optional alternatives disclosed on page 22, lines 16-18 of the application as filed.

2.4 The only passage of the application as filed directed to particles containing less than 5 ppm acetaldehyde according to amendment d) is the last sentence of the paragraph on page 12, lines 15-31. That sentence cannot be dissociated from the rest of the paragraph, as indicated by its first word "Moreover". That reading is further confirmed by the fact that said sentence is directed to "particles fed to the extrusion zone", which is clearly related to the extrusion process described at the beginning of that paragraph. Therefore, the range of less than 5 ppm acetaldehyde has to be read in combination with the remaining features disclosed in said paragraph on page 12 of the application as filed.

2.4.1 According to the paragraph on page 12, lines 15-31, the particles are in particular characterised in that the intrinsic viscosity at their surface does not vary from their intrinsic viscosity at their center by more than 0.25 dL/g. That definition limits the intrinsic viscosities as follows ( $IV_{\text{center}}$  and  $IV_{\text{surface}}$  being the intrinsic viscosity at the center and at the surface of the particle, respectively):

$$IV_{\text{center}} - 0.25 \leq IV_{\text{surface}} \leq IV_{\text{center}} + 0.25$$

However, the wording of claim 1 of the main request "the intrinsic viscosity at the surface of the particle is less than 0.25 dL/g higher than the intrinsic viscosity at the center of the particle" defines that:

$$IV_{\text{surface}} \leq IV_{\text{center}} + 0.25$$

Therefore, the definitions of the particles in terms of the difference between the intrinsic viscosity at the surface and at the center of the particle specified in claim 1 and on page 12, lines 15-31 of the application as filed are neither identical nor equivalent. In that respect, the paragraph directly preceding it (page 12, lines 5-13) indicates that both definitions of the intrinsic viscosity gradient were contemplated in the application as filed, but they were directed to two different embodiments (see the wording "in another embodiment" and "in yet another embodiment").

For those reasons, the paragraph on page 12, lines 15-31 of the application as filed does not constitute a valid basis for the combination of features now being present in claim 1, in particular not for the combination of the intrinsic viscosity difference (as defined in original claim 1) and acetaldehyde content (according to amendment d)) according to present claim 1.

- 2.4.2 The paragraph on page 12, lines 15-31 of the application as filed also does not specify that the particles should have a degree of crystallinity of at least 35% and that they should not have been subjected to an increase in their molecular weight in the solid

state, according to above identified amendments b) and c).

- (a) Regarding the degree of crystallinity, the only information provided in the paragraph on page 12, lines 15-31 of the application as filed is that the particles should desirably have "sufficient crystallinity to prevent them sticking". Not only is the degree of crystallinity there presented as an optional embodiment but there is also no further indication in the application as filed what a "sufficient crystallinity" means in that respect, in particular not in the passage between page 24, line 8 and page 25, line 3 of the application as filed, which is specifically directed to the relationship between the degree of crystallinity and non-sticking properties. The appellant's argument according to which the skilled person would consider that a degree of crystallinity of about 25% would be sufficient to avoid stickiness was not contested by the respondent. Under these circumstances, there is no reason why the skilled person reading the application as filed would have considered that a degree of crystallinity of at least 35% had any special meaning, in particular as compared to the ranges of at least 25% or at least 30% which are also disclosed on page 22, lines 16-18 of the application as filed. Therefore, the combination of amendments c) and d) may only be arrived at after combining two passages disclosed independently from each other in the application as filed.
- (b) Original claims 4 and 5, which were directed to a specific degree of crystallinity and acetaldehyde

level, each referred to all the foregoing claims. Therefore, there is no specific indication that the combination of less than 25% crystallinity (claim 4) and an acetaldehyde content of less than 10 ppm (claim 5) might be particularly important, as argued by the respondent. Moreover, those claims of the application as filed were, as explained in above section 2.4.1, not directed to particles defined in terms of the intrinsic viscosity gradient and also did not reflect the absence of an increase in molecular weight according to claim 1 of the main request. The same is valid regarding original claim 37 which was directed to particles defined in a more specific manner than that according to claim 1 (nature of the polyester; intrinsic viscosity and intrinsic viscosity gradient). Therefore, claims 4, 5 and 37 cannot provide a basis for the combination of amendments d) and c) made at the present level of generality.

- (c) The acetaldehyde content of the particles described in the examples of the application as filed is not indicated, in particular not in examples 2 and 4 which are specified as being illustrative of the invention. Therefore, also the examples of the application as filed may neither provide a valid support for amendment d) nor for the combination of features now being defined in claim 1. They can also not constitute a pointer thereto.

2.4.3 In view of the above, the combination of features according to amendments b), c) and d) now specified in claim 1 may only be arrived at after combining various passages that were disclosed separately in the



application as filed in relation to preferred embodiments in terms of e.g. no increase in molecular weight in the solid state, specific degree of crystallinity and specific acetaldehyde content. At the same time, the broadest meaning provided in the application as filed is maintained for other features that are presented as being directed to preferred embodiments in the application as filed (e.g. absolute value of intrinsic viscosity: original claims 2, 19, 21, 37 and the corresponding passages of the description; selection of the carboxylic acid components and amounts of the carboxylic acid and hydroxyl components: original claims 8, 18 and the corresponding passages of the description). Also in that regard, it was not shown that such a combination of features emerges from the application as filed.

2.5 Under those circumstances, the subject-matter of operative claim 1 cannot be seen as being directly and unambiguously disclosed in the application as filed.

2.6 For those reasons, the requirements of Art. 123 (2) EPC are not met.

### **Auxiliary request**

3. Admissibility

3.1 The admissibility of the auxiliary request, which was submitted during the oral proceedings before the Board, is subject to the Board's discretion (Art. 13 (1) and 13 (3) RPBA).

3.2 The auxiliary request was filed by the respondent as an attempt to overcome the appellant's objection pursuant to Art. 123 (2) EPC. Although said objection had been

submitted in writing well in advance of the oral proceedings, all the arguments in support of said objection, in particular the argument directed to the different definitions of the difference in intrinsic viscosity between the surface and the center of the particles between claim 1 of the main request and page 12, lines 15-31 of the application as filed (see section 2.4.1), only became clear to the respondent during the oral proceedings before the Board. Therefore, as a matter of fairness, in the present case it is justified to give the respondent the opportunity to try to overcome that objection.

Besides, the auxiliary request did not appear to raise issues which the parties or the Board could not be expected to deal with without adjourning the oral proceedings.

For those reasons, the auxiliary request was admitted to the proceedings.

4. Art. 123 (2) EPC
- 4.1 Claim 1 corresponds to claim 22 as originally filed with the following amendments:
  - a) definition of the surface and center in % by mass;
  - b) addition of the feature "wherein the particle has not been subjected to an increase in its molecular weight in the solid state";
  - c) modification of the degree of crystallinity from "at least 15%" to "at least 35%";

- d) addition of the acetaldehyde content of less than 5 ppm;
  - e) addition of the difference between the intrinsic viscosity at the surface and the center of the particle of 0.05 dL/g or less;
  - f) addition of the drying step at a temperature of at least 140°C.
- 4.2 Regarding amendments a), b) and d), the same considerations as for the corresponding amendments made in claim 1 of the main request apply (see above sections 2.1, 2.2 and 2.4).
- 4.3 Regarding amendment c) the only basis in the application as filed for the range of "at least 35%" is to be found, as for the main request, in the list of ranges given on page 22, lines 16-18 of the application as filed. Although amendment c) of the auxiliary request does not involve the addition of a new feature, as for the main request, but the modification of a feature already present (in original claim 22), the same conclusion as for the main request is nevertheless valid: since there is no pointer in the application as filed for using a particle having a degree of crystallinity of "at least 35%", amendment c) represents an arbitrary selection among the alternatives specified in the application as filed.
- 4.4 Amendment e) amounts to the combination of original claims 23 and 22 with an additional selection of one of two alternatives comprised in claim 23 and a limitation to the more preferred range for the intrinsic viscosity difference. In that respect, it was not shown that the application as filed contained any pointer to this

particular combination of features.

- 4.5 Amendment f) amounts to the combination of original claims 27 and 22, the dependency on original claim 23 being respected.
- 4.6 It is also questionable whether the application as filed provides a basis for the combination of those features.
- 4.6.1 Apart from the selection needed in order to arrive at amendment e) (section 4.4 above), one would further have to modify the process of original claim 22 in at least three ways in order to arrive at the subject-matter of claim 1 (degree of crystallinity; no molecular weight increase in the solid state; acetaldehyde content). The respondent did not show that said combination of features emerges from the application as filed or that the skilled person would have had good reasons to seriously contemplate combining the different passages of the application as filed supporting each of those features.
- 4.6.2 Regarding the drying temperature (amendment f)), page 12, lines 15-31 of the application as filed, discloses drying temperatures of 140°C to 180°C, which does not constitute a basis for the temperature range of "at least 140°C" now being specified in claim 1. In addition, the subject-matter now being defined constitutes a combination of said disclosure with several other passages of the application as filed directed to preferred embodiments in terms of e.g. degree of crystallinity, the absence of molecular weight increase in the solid state, the selection of 5 ppm acetaldehyde, the selection of a more stringent limitation in terms of the intrinsic viscosity gradient

between surface and center. By contrast, for other features originally presented as preferred embodiments their most general or broadest meaning is maintained (e.g. intrinsic viscosity; nature of polyester constituents). Also in that respect was it not shown that such a combination of features emerges from the application as filed.

Therefore, in the circumstances of the case, the combination of at least amendments b), d), e) and f) is not directly and unambiguously disclosed in the application as filed.

4.7 For those reasons, the requirements of Art. 123 (2) EPC are not met.

5. None of the respondent/patent proprietor's requests being allowable, the patent has to be revoked.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

On behalf of the Chairman  
(according to Art. 8(3) RPBA):



B. ter Heijden

O. Dury

Decision electronically authenticated