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**Datasheet for the decision
of 12 February 2019**

Case Number: T 0312/16 - 3.3.03
Application Number: 10727628.9
Publication Number: 2443189
IPC: C08K3/04, C08K7/14, C08L77/00
Language of the proceedings: EN

Title of invention:

SINGLE CONDUCTIVE PELLETS OF LONG GLASS FIBER REINFORCED
THERMOPLASTIC RESIN AND MANUFACTURING METHOD THEREOF

Patent Proprietor:

SABIC Global Technologies B.V.

Opponents:

Evonik Degussa GmbH
EMS-PATENT AG

Relevant legal provisions:

EPC Art. 123(2), 123(3)
RPBA Art. 13(1), 12(2)

Keyword:

Amendments - Art. 123(2) - Main request, main request A, first and second auxiliary requests (no) - Art. 123(2) - Third auxiliary request (yes) - Art. 123(3) - Third, fourth and fifth auxiliary requests (no) - Art. 123(2) and (3) - Sixth auxiliary request (yes)

Remittal to the opposition division for consideration of late-filed objection (no)

Late-filed objection - admitted (no)

Decisions cited:

G 0001/93, G 0003/14



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Case Number: T 0312/16 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 12 February 2019

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 14 December
2015 revoking European patent No. 2443189
pursuant to Article 101(3) (b) EPC.**

Composition of the Board:

Chairman D. Semino
Members: D. Marquis
 R. Cramer

Summary of Facts and Submissions

I. The appeal lies against the decision of the opposition division posted on 14 December 2015 revoking European patent No. 2 443 189.

II. The European patent was based on PCT application WO 2010/148383 which contained 11 claims, claims 1, 5, 7 and 11 reading as follows:

"1. A pellet, comprising:

- a) from 30 to 70 wt% of a thermoplastic resin;
- b) from 20 to 60 wt% of a plurality of long reinforcing fibers aligned substantially parallel along a longitudinal axis of the pellet and having a length of at least 0.4 mm; and
- c) up to 10 wt% of a conductive filler dispersed in the pellet."

"5. The pellet of claim 1, wherein the conductive filler comprises a carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g."

"7. A method of forming a single conductive fiber reinforced pellet comprising the steps of:

- a) extruding from 30 to 70 wt% of a thermoplastic resin with up to 10 wt% of a conductive filler to disperse the conductive filler in the thermoplastic resin and form a resin mixture;
- b) pulling from 20 to 60 wt% of reinforcing fibers through the resin mixture and into a heated die; and
- c) pelletizing the fiber reinforced resin mixture to form the single conductive fiber reinforced pellets such that the reinforcing fibers have a length of at least 0.4 mm."

"11. The method of claim 7, wherein the conductive filler comprises a carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g."

III. The European patent as granted contained 11 claims, claims 1, 5, 6, 7 and 11 thereof reading as follows:

"1. A pellet, comprising:

- a) from 30 to 70 wt% of a thermoplastic resin;
- b) from 20 to 60 wt% of a plurality of long reinforcing fibers aligned substantially parallel along a longitudinal axis of the pellet and having a length of at least 0.4 mm; and
- c) 0.1 to 10 wt% of carbon black dispersed in the pellet."

"5. The pellet of claim 1, wherein the carbon black has a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g."

"6. A molded article comprising the pellet of claim 1."

"7. A method of forming a single conductive fiber reinforced pellet comprising the steps of:

- a) extruding from 30 to 70 wt% of a thermoplastic resin with 0.1 to 10 wt% of carbon black to disperse the carbon black in the thermoplastic resin and form a resin mixture;
- b) pulling from 20 to 60 wt% of reinforcing fibers through the resin mixture and into a heated die; and
- c) pelletizing the fiber reinforced resin mixture to form the single conductive fiber reinforced pellets such that the reinforcing fibers have a length of at

least 0.4 mm."

"11. The method of claim 7, wherein the carbon black has a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g."

- IV. The patent was opposed on the grounds that its subject-matter lacked novelty and inventive step, was not sufficiently disclosed and extended beyond the content of the application as originally filed.
- V. The decision of the opposition division was based on a main request and on the first and second auxiliary requests, all filed during the oral proceedings before the opposition division on 24 November 2015.

Claim 1 of the main request read:

"1. A pellet, comprising:

- a) from 30 to 70 wt% of a thermoplastic resin;
- b) from 20 to 60 wt% of a plurality of reinforcing fibers aligned substantially parallel along a longitudinal axis of the pellet and having a length of at least 0.4 mm; and
- c) 0.1 to 10 wt% of carbon black dispersed in the pellet, wherein the carbon black has a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g, and wherein the total amount of all carbon black is 10 wt.% or less."

Claim 1 of the first auxiliary request corresponded to claim 1 of the main request from which the wording "and wherein the total amount of all carbon black is 10 wt.% or less" was deleted from that claim.

In claim 1 of the second auxiliary request, component

c) was reformulated as "0.1 to 10 wt.% of carbon black with a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g, dispersed in the pellet."

The decision of the opposition division, insofar as it is relevant for the present case, can be summarized as follows:

- (a) Claim 1 of the main request fulfilled the requirements of Article 123(3) EPC since its subject-matter corresponded to claim 5 as granted.
- (b) The requirements of Article 123(2) EPC were however not met by the main request. The application as originally filed only disclosed that a conductive filler was present in a range of from 0.1 to 10 wt% in the composition and did not provide a basis for the limitation of the total amount of carbon black to 10 wt% or less as claimed. Since claim 1 was not limited to conductive carbon black and not all types of carbon black were conductive as suggested in paragraph 37 of the application, the maximum amount disclosed for the conductive filler in the application did not form a proper basis for the definition of the maximum amount of any carbon black in the pellet.
- (c) While claim 1 of the first auxiliary request also fulfilled the requirements of Article 123(3) EPC, it contravened the requirements of Article 123(2) EPC. There was indeed no basis in the application as originally filed for a range of 0.1 to 10 wt% of carbon black as defined by its pore volume and iodine adsorption.

(d) Since claim 1 of the second auxiliary request was equivalent to claim 1 of the first auxiliary request, the second auxiliary request did not fulfil the requirements of Article 123(2) EPC for the same reasons as given for the first auxiliary request.

VI. The proprietor (appellant) lodged an appeal against that decision, providing a main request and the first to fifth auxiliary requests with letter of 3 November 2016.

Claim 1 of the main request read:

"1. A pellet, comprising:
a) from 30 to 70 wt.% of a thermoplastic resin;
b) from 20 to 60 wt.% of a plurality of long reinforcing fibers aligned substantially parallel along a longitudinal axis of the pellet and having a length of at least 0.4 mm; and
c) 0.1 to 10 wt.% of carbon black dispersed in the pellet, wherein the carbon black has a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g, and
wherein the total amount of carbon black dispersed in the pellet is 0.1 to 10 wt.%."

Claim 1 of the first auxiliary request corresponded to claim 1 of the main request in which the minimum value of the range defining the amount of carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g and that of the total amount of carbon black was amended to 0.5 wt.%.

Claim 1 of the second auxiliary request corresponded to claim 1 of the first auxiliary request for which the

carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g dispersed in the pellet was further defined as being in a minimum amount sufficient to enable the selected conductivity to be achieved.

Claims 1 and 5 of the third auxiliary request read as follows:

"1. A method of forming a single conductive fiber reinforced pellet comprising the steps of:
a) extruding from 30 to 70 wt% of a thermoplastic resin with 0.1 to 10 wt% of carbon black to disperse the carbon black in the thermoplastic resin and form a resin mixture, wherein the carbon black has a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g;
b) pulling from 20 to 60 wt% of reinforcing fibers through the resin mixture and into a heated die; and
c) pelletizing the fiber reinforced resin mixture to form the single conductive fiber reinforced pellets such that the reinforcing fibers have a length of at least 0.4 mm."

"5. A molded article comprising the pellet obtained by the method of claims 1-4."

Claim 1 of the fourth and fifth auxiliary requests corresponded to claim 1 of the third auxiliary request with the additional amendments of the first and second auxiliary requests respectively.

Claim 5 of the fourth and fifth auxiliary requests was identical to claim 5 of the third auxiliary request.

- VII. In a communication sent in preparation of oral proceedings, the Board summarised the points to be dealt with and provided a preliminary view on the disputed issues.
- VIII. With letter of 11 December 2018, the appellant provided a main request A which corresponded to the main request filed with letter of 3 November 2016 wherein only method claim 6 was amended by adding the wording "wherein the total amount of carbon black dispersed in the pellet is 0.1 to 10 wt.%" at the end of the claim. Claim 1 was unamended.
- IX. Oral proceedings were held on 12 February 2019 during which a sixth auxiliary request was provided by the appellant. That request contained four claims all directed to a method and corresponded to the third auxiliary request with the deletion of product claim 5.

After the Board had announced *inter alia* its conclusion that claim 1 of the third auxiliary request met the requirements of Article 123(2) and (3) EPC and the appellant had filed a sixth auxiliary request including claim 1 of the third auxiliary request as the sole independent claim, opponent 1 (respondent 1) requested to present a new objection under Article 123(2) EPC against that claim. After discussion on the admittance of the new objection he requested the remittal of the case to the department of first instance for further examination of their new Article 123(2) EPC objection against the sixth auxiliary request, or alternatively the admittance of their new Article 123(2) EPC objection against the sixth auxiliary request into the present appeal proceedings.

- X. The arguments provided by the appellant, as far as relevant to the present decision, can be summarised as follows:

Main request - Article 123(2) EPC

- (a) The limitation of the total amount of carbon black according to claim 1 of the main request found a basis in the application as originally filed. In particular, the minimum value of 0.1 wt.% was disclosed in paragraph 31 of the description. Even though that value was disclosed in the context of conductive fillers, it applied to all carbon blacks that could be added to the pellet. As to the maximum value of 10 wt.% defining the claimed range, it found an implicit basis in the fact that the skilled person would not have considered using more than 10 wt.% of carbon black in the pellet.
- (b) The contested amendment was also allowable in view of decision G 1/93 of the Enlarged Board of appeal since the amendment of claim 1 only limited the claimed subject-matter without providing any technical contribution.
- (c) In that respect, it could be derived from the application as originally filed that the technical contribution of the addition or non-addition of carbon black could only be related to the antistatic properties or the coloration of the pellet. Since the pellet was already rendered conductive by the presence of a conductive filler, it already had antistatic properties. The definition of the total amount of carbon black by a numerical range in claim 1 therefore did not result in any further technical contribution with respect

to the antistatic properties of the pellet. Also, since the claimed pellets were already coloured from the presence of 0.1 to 10 wt.% to a carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g as component c), any other carbon black present would not add to that coloration and could thus not be seen as having a technical contribution. The limitation of the total amount of carbon black in claim 1 therefore fulfilled the requirements set out in the decision G 1/93 of the Enlarged Board of Appeal. For all these reasons, claim 1 of the main request met the requirements of Article 123(2) EPC.

Main request A - Admittance and Article 123(2) EPC

(d) Main request A was filed in response to an objection raised under Article 123(3) EPC in appeal. The amendment performed in that respect did not add complexity to the case since it merely limited method claim 6 in accordance with claim 1. Main request A should therefore be admitted into the proceedings. The arguments relating to the requirements of Article 123(2) EPC that were submitted for claim 1 of the main request equally applied to claim 1 of the main request A.

First and second auxiliary requests - Article 123(2) EPC

(e) With regard to Article 123(2) EPC, the arguments submitted for claim 1 of the main request equally applied to the first and second auxiliary requests.

Third auxiliary request

Article 123(2) EPC

(f) The limitation of the amount in carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g to the range of 0.1 to 10 wt.% in claim 1 found a basis in paragraphs 29 to 31 of the application as originally filed. In paragraph 30, the carbon black now specified in claim 1 was disclosed as the preferred conductive filler. It was also apparent that the minimum amount of 0.1 wt.% limiting claim 1, which was disclosed in paragraph 31, applied to the preferred conductive filler as now defined in claim 1. Claim 1 of the third auxiliary request met therefore the requirements of Article 123(2) EPC.

Article 123(3) EPC

(g) The wording of claim 1 of the third auxiliary request corresponded exactly to that of claim 11 as dependent on claim 7 of the patent as granted. Claim 1 therefore met the requirements of Article 123(3) EPC.

(h) Claim 5 of the third auxiliary request found a basis in claim 6 of the patent as granted which was directed to a molded article. The requirements of Article 123(3) EPC were thus met.

Fourth and fifth auxiliary requests - Article 123(3) EPC

(i) With regard to the requirements of Article 123(3) EPC, the arguments submitted for the third

auxiliary request also applied to the fourth and fifth auxiliary requests.

Sixth auxiliary request - Article 123(2) and (3) EPC

- (j) The arguments submitted for claim 1 of the third auxiliary request in view of the requirements of Article 123(2) and (3) EPC equally applied to the sixth auxiliary request.
- (k) The further objection under Article 123(2) EPC put forward by respondent 1 at the oral proceedings before the Board after the conclusion and the deliberation of the Board on that matter had already been announced was filed late. This objection could have been filed earlier and there was no justification for a remittal of the case to the opposition division to consider that objection or to discuss it at the oral proceedings before the Board. The objection should not be admitted into the proceedings.

XI. The arguments of opponents 1 and 2 (respondents 1 and 2), as far as relevant to the present decision, can be summarised as follows:

Main request - Article 123(2) EPC

- (a) There was no basis for the limitation of the total amount of carbon black in the pellet in the application as originally filed. The passage in paragraphs 29-31 of the description only pertained to conductive fillers and not to any carbon black. That amendment was also not allowable in view of decision G 1/93. In that respect, the limitation of the total amount of carbon black provided a

technical contribution to the claimed pellets since the application as originally filed disclosed that carbon black had an antistatic and colouring effect. Claim 1 of the main request therefore did not meet the requirements of Article 123(2) EPC.

Main request A - Admittance and Article 123(2) EPC

- (b) Main request A should not be admitted into the proceedings since it was filed late and it did not address any of the objections raised under Article 123(2) EPC against claim 1. In that respect, the arguments submitted against claim 1 of the main request A were the same as those submitted for claim 1 of the main request.

First and second auxiliary requests - Article 123(2) EPC

- (c) With regard to Article 123(2) EPC, the arguments submitted for claim 1 the main request equally applied to the first and second auxiliary requests.

Third auxiliary request

Article 123(2) EPC

- (d) There was no basis in the application as originally filed for the limitation of the amount of carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g to a range of 0.1 to 10 wt.% according to claim 1 of the third auxiliary request. The teaching regarding the minimum amount of conductive filler found in paragraph 31 was vague and suggested that other factors such as the resin, the amount of fiber

reinforcement and the properties of the molded article had to be taken into account. The minimum amount for a specific conductive filler thus did not necessarily correspond to any of the numerical values disclosed in that passage. There was also no basis in that paragraph for the selection of any specific carbon black in combination with a given minimum amount. Moreover, there was no indication that the specific carbon black defined in claim 1 was a conductive filler. Claim 1 therefore did not meet the requirements of Article 123(2) EPC.

Article 123(3) EPC

- (e) Claim 11 of the patent as granted did not provide a basis for claim 1 of the third auxiliary request. It was also unclear how the granted claim had to be interpreted with respect to the carbon black used in the method. Claim 1 therefore did not meet the requirements of Article 123(3) EPC.

- (f) Claim 5 of the third auxiliary request was not part of the granted claims. Since claim 5 was formulated as a product-by-process, it was not limited by the method defined in claim 1 and it did not necessarily correspond to the product of claim 5 as granted. Claim 5 did not meet therefore the requirements of Article 123(3) EPC.

Fourth and fifth auxiliary requests - Article 123(3) EPC

- (g) Since claim 5 in the fourth and fifth auxiliary requests was identical to claim 5 of the third auxiliary request, the fourth and fifth auxiliary request did not meet the requirements of Article

123(3) EPC for the same reasons as the third auxiliary request.

Sixth auxiliary request - Article 123(2) and (3) EPC

- (h) The claims of the sixth auxiliary request corresponded to claims 1-4 of the third auxiliary request. The objections raised under Article 123(2) and (3) EPC against the third auxiliary request also applied to the sixth auxiliary request.
- (i) In addition to these objections, method claim 1 of the sixth auxiliary request did not meet the requirements of Article 123(2) EPC since the application as originally filed did not provide a basis for the limitation of the method to carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g in step a) specifically.
- (j) That objection was filed late but there had previously been no necessity to argue against the method claim since it was clear that the product claim did not meet the requirements of Article 123(2) and (3) EPC. Moreover, the objection did not add any undue complexity to the proceedings. The case should be remitted to the opposition division for consideration of that objection or the objection should be admitted into the appeal proceedings and dealt with during the oral proceedings before the Board.

XII. The appellant requested that the decision under appeal be set aside and the case be remitted to the department of first instance for further prosecution on the basis of the claims of the main request filed with letter of

3 November 2016, or of main request A filed with letter of 11 December 2018, or of one of the first to fifth auxiliary requests filed with letter of 3 November 2016 or on the basis of the claims of the sixth auxiliary request filed during the oral proceedings. The appellant further requested that respondent 1's requests with respect to the sixth auxiliary request be rejected.

The respondents requested that the appeal be dismissed. Respondent 1 furthermore requested that main request A not be admitted into the proceedings. Respondent 1 further requested remittal of the case to the department of first instance for further examination of its new Article 123(2) EPC objection against the sixth auxiliary request, or alternatively the admittance of its new Article 123(2) EPC objection against the sixth auxiliary request into the present appeal proceedings.

Reasons for the Decision

1. Main request - Article 123(2) EPC
 - 1.1 Claim 1 of the main request was amended inter alia by adding the feature limiting the total amount of carbon black dispersed in the pellet to the range of 0.1 to 10 wt.%.
 - 1.2 The basis for that amendment in the application as originally filed indicated by the appellant was in paragraph 31, which concerns the definition of the amount of conductive filler dispersed in the pellet. Since paragraph 31 however only relates to conductive fillers, the teaching of that paragraph relative to the minimum and maximum amounts of conductive fillers in

the pellet can only be considered to limit the amount of conductive carbon black.

1.3 The amendment of claim 1 of the main request however concerns the total amount of carbon black, irrespective of whether it is conductive or non-conductive. The presence of non-conductive carbon black in the pellet is indeed not excluded in the application as originally filed, for example when it is present in combination with chemical antistatic agents (paragraph 37). That point was already made in the decision of the opposition division (passage bridging pages 5 and 6 and paragraph 2 on page 7) and was also not contested by the appellant. Since paragraph 31 only concerns conductive fillers, it cannot serve as a basis for the wording of claim 1 of the main request. The Board does also not find another basis for the amendment of claim 1 of the main request in the application as originally filed.

1.4 The appellant further argued that the amendment of claim 1 was allowable under Article 123(2) EPC according to decision G 1/93 of the Enlarged Board of Appeal (OJ EPO 1994, 541). It was in this respect submitted that the limitation of the total amount of carbon black in claim 1 was allowable even if it found no basis in the application as originally filed since it only limited the scope of protection of claim 1 and did not provide any technical contribution to the claimed subject matter.

1.5 However, the application as originally filed suggests that the presence of carbon black in the pellet has a technical contribution. In particular, paragraph 5 discloses that carbon black is known in the art to have an influence on the mechanical properties of conductive

thermoplastic resins. Besides, paragraph 37 discloses that carbon black can be used in a polymeric resin alongside chemical antistatic agents to render the composition electrostatically dissipative, suggesting that carbon black can alter the properties of chemical antistatic agents. The addition of carbon blacks as a filler in pellets is thus known to alter the properties of the pellet beyond the provision of conductivity. These effects are technical contributions made to the claimed subject-matter in particular since claim 1 aims at limiting the amount of carbon blacks in general. Under these circumstances, the Board concludes that the amendment of claim 1 cannot be considered to be allowable in view of decision G 1/93 of the Enlarged Board of Appeal.

- 1.6 Claim 1 of the main request therefore does not meet the requirements of Article 123(2) EPC.
2. Main request A - Admittance and Article 123(2) EPC
 - 2.1 The claims of main request A correspond to the claims of the main request with an amendment of method claim 6 relating to the total amount of carbon black dispersed in the pellet. It is apparent that that request was filed in response to an objection under Article 123(3) EPC that was first raised by respondent 2 with their reply to the statement setting out the grounds of appeal (point 2.2). The amendment of method claim 6 in main request A put this claim in line with product claim 1 of the main request and as far as the requirements of Article 123(2) EPC are concerned, no separate arguments were filed by any of the parties for main request A. The request does therefore not add any complexity to the case. In view of this, the Board finds that the admittance of that request into the

proceedings did not put the respondents and the Board in the position of being unable to tackle it during the oral proceedings. The Board finds it appropriate in that situation to exercise its discretion according to Article 13(1) RPBA by admitting main request A into the proceedings.

2.2 The amendment in method claim 6 of main request A does not change the situation with respect to extension of the subject-matter beyond the content of the application as originally filed of product claim 1, which was analysed for the main request. The conclusion reached for claim 1 of the main request on Article 123(2) EPC thus equally applies to claim 1 of main request A so that claim 1 of main request A does not meet the requirements of Article 123(2) EPC.

3. First and second auxiliary requests - Article 123(2) EPC

3.1 Claim 1 of the first auxiliary request corresponds to claim 1 of the main request in which the range defining the total amount of carbon black was amended to 0.5 wt. % to 10 wt.%. With respect to that amendment however, claim 1 of the first auxiliary request is not fundamentally different from claim 1 of the main request since it equally limits the amount of carbon black irrespective of whether it is conductive or not. In fact, the same basis in paragraph 31 of the application as filed was cited and no separate arguments were filed by any of the parties as to the first auxiliary request. The same arguments and the same conclusion regarding the requirements of Article 123(2) EPC therefore apply to the first auxiliary request.

3.2 Claim 1 of the second auxiliary request corresponds to claim 1 of the first auxiliary request for which the carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g dispersed in the pellet was further defined as being in a minimum amount sufficient to enable the selected conductivity to be achieved. That amendment only concerns conductive carbon black. The feature limiting the total amount of carbon black is otherwise the same as in the first auxiliary request. For the second auxiliary request also no separate arguments were filed by any of the parties. Under these circumstances, the reasoning and conclusion applying to claim 1 of the main request equally apply to claim 1 of the second auxiliary request.

4. Third auxiliary request

4.1 Article 123(2) EPC

4.1.1 Claim 1 of the third auxiliary request is directed to a method that was present as claim 6 in the main request. It is argued by the respondents that the dispersion of 0.1 wt.% to 10 wt.% of a specific carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g in the thermoplastic resin in step a) of the method finds no basis in the application as originally filed.

4.1.2 Claim 1 of the third auxiliary request finds a basis in claim 11 of the application as originally filed in combination with the disclosure in the original description. Claim 11 is dependent on method claim 7 and is limited to carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g. That limitation of the conductive

filler also finds a basis in paragraph 29 and 30 of the application as originally filed in which that specific carbon black is disclosed not only as being an especially preferred conductive filler, but also as the only preferred specific conductive filler explicitly mentioned in the application as originally filed.

4.1.3 The amount of conductive filler dispersed in step a) of the method is defined in claim 7 of the application as originally filed. Since claim 11 is dependent on claim 7, the open range of up to 10 wt.% limiting claim 7 thus also defines the amount of carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g of claim 11. In addition, the minimum amount defining the claimed range according to claim 1 of the third auxiliary request (0.1 wt.%) finds a basis in paragraph 31 of the application as originally filed. While the value of 0.1 wt.% is disclosed in the more general context of conductive fillers in paragraph 31, it can be derived that that value specifically applies to carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g since this carbon black is defined as the (only) preferred conductive filler in the previous paragraph.

4.1.4 In this respect, it was additionally argued that the minimum amount of 0.1 wt.% in conductive filler broadly disclosed in paragraph 31 would not apply to all possible conductive fillers since it was further taught that the amount of conductive filler also depended on the type of resin, the amount of fiber reinforcement and the final properties of the molded article. It is however apparent that that general remark in the application as originally filed is not one that limits the amount of conductive filler beyond the numerical

range that is taught in paragraph 31. In particular, no further indication is provided as to how the amount of conductive filler would then be limited by the type of resin, the amount of fiber reinforcement and the final properties of the molded article. The Board therefore finds that the combination of the range of 0.1 wt.% to 10 wt.% as defined in claim 7 and paragraph 31 and the preferred carbon black defined in claim 11 and paragraph 30 finds a basis in the application as originally filed. Consequently claim 1 of the third auxiliary request meets the requirements of Article 123(2) EPC.

4.2 Article 123(3) EPC

4.2.1 Claims 1 and 5 of the third auxiliary request, which are respectively directed to a method and a molded article, have been objected to under Article 123(3) EPC.

4.2.2 Claim 1 of the third auxiliary request corresponds to claim 11 of the patent as granted read with independent method claim 7 from which it depends. Granted claim 7 is directed to a method of forming a single conductive filler reinforced pellet comprising in step a), the extrusion of a resin with 0.1 to 10 wt.% of carbon black. Since step a) in claim 7 is the only instance in which carbon black is mentioned, it is immediately apparent that the carbon black further defined in claim 11 as granted can only be that which is mentioned in step a) of the method according to claim 7. As claim 1 of the third auxiliary request corresponds to a granted claim, the Board finds that the requirements of Article 123(3) EPC are necessarily satisfied.

- 4.2.3 Respondent 1 also considered that it was unclear how claim 1 of the third auxiliary request had to be understood by comparison to claim 11 of the granted patent. In that respect, reference is made to decision G 3/14 (OJ EPO 2015, A102) according to which amended claims of a patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that, the amendment introduces lack of clarity. Since claim 1 of the third auxiliary request corresponds exactly to claim 11 of the granted patent, any unclarity in claim 1 of the present request would have already been present in the claims of the patent as granted. It follows that claim 1 of the third auxiliary request may thus not be examined for compliance with Article 84 EPC.
- 4.2.4 Claim 5 of the third auxiliary request is directed to a molded article comprising the pellet obtained by the method of claims 1 to 4. Claim 5, which is defined in terms of a process for its preparation (product-by-process claim), was not part of the claims of the patent as granted which included as claim 6 a molded article however defined as comprising the pellet of claim 1.
- 4.2.5 A product-by-process claim is interpreted according to the case law of the Boards of Appeal as a claim directed to the product per se, since the reference to a process for its preparation serves only the purpose of defining the subject-matter for which protection is sought, which is a product (Case Law of the Boards of Appeal, 8th Edition, July 2016, II.A.7.1). Since process claim 1 is defined in an open manner ("comprising the steps of..."), the molded article according to claim 5 of the third auxiliary request is not limited to a product obtainable by following

exclusively the process steps defined in claims 1 to 4, but includes products obtainable by a process including these steps together with any additional one.

4.2.6 As a consequence, contrary to the molded article of claim 6 of the patent as granted which was defined by the features of the product of claim 1 to which it referred, the molded article of claim 5 of the third auxiliary request is not defined by the amounts of the components defined in the steps of the method according to claim 1 as those amounts may be changed by further processing. Consequently, the formulation of claim 5 of the third auxiliary request extends the protection conferred by the European patent as it includes products having a pellet with a different composition from the one of granted claim 1 and therefore not covered by granted claim 6. For these reasons, claim 5 of the third auxiliary request does not meet the requirements of Article 123(3) EPC.

5. Fourth and fifth auxiliary requests - Article 123(3) EPC

5.1 Claim 5 of the fourth and fifth auxiliary requests correspond exactly to claim 5 of the third auxiliary request.

5.2 Although the methods according to claim 1 of the fourth and fifth auxiliary requests were amended in that the minimum amount of carbon black to be extruded with the thermoplastic resin was raised to 0.5 wt.% (fourth and fifth auxiliary request) and was additionally defined to be sufficient to enable the selected conductivity to be achieved (fifth auxiliary request), these amendments still concern method steps of claim 1 and do not constitute a limitation for the molded article

according to claim 5 as the latter claim is formulated as a product-by-process claim and the method is defined in an open manner. The same conclusion as reached for claim 5 of the third auxiliary request therefore applies to claim 5 of the fourth and fifth auxiliary requests.

5.3 Since no separate arguments were filed by any of the parties as to the fourth and fifth auxiliary requests, it can readily be concluded that these requests do not meet the requirements of Article 123(3) EPC.

6. Sixth auxiliary request - Article 123(2) and (3) EPC

6.1 The sixth auxiliary request was first filed during the oral proceedings before the Board. The claims of the sixth auxiliary request correspond to the claims of the third auxiliary request from which claim 5 was deleted. The respondents did not object to the admittance of the sixth auxiliary request into the proceedings. In view of this and since the claims of the sixth auxiliary request correspond to claims which at the point in which the request was submitted had already been debated by the parties with regard to the requirements of Article 123(2) and (3), on which deliberation of the Board with regard to those requirements had already taken place, and with respect to which the Board had already announced to the parties the conclusion of the deliberation, the Board had also no objection to the admittance of the sixth auxiliary request and found it appropriate to exercise its discretion by admitting the request into the proceedings.

6.2 It is only after the request was submitted and admitted with all the parties being aware that it included only claims of the already debated third auxiliary request,

that respondent 1 requested the admittance of a further, new, objection under Article 123(2) EPC against claim 1 of the sixth auxiliary request. The objection of respondent 1 was directed to the definition, in the method of claim 1, of the carbon black as being a carbon black having a pore volume (DBP) of 480-510 ml/100 g and an iodine adsorption of 1000-1100 mg/g in step a) of the claimed method. That objection was in particular based on the argument that the application as originally filed, if it disclosed the specific carbon black now part of claim 1, did not provide a support for the definition of that carbon black in step a) of the method specifically.

- 6.3 It was acknowledged that this objection was filed late into the appeal proceedings. It was nonetheless requested to remit the case to the department of first instance for further examination of this new Article 123(2) EPC objection against the sixth auxiliary request, or alternatively to admit the new Article 123(2) EPC objection against the sixth auxiliary request into the appeal proceedings.
- 6.4 The reason given by respondent 1 for the late filing of that objection was that it had only occurred to them towards the end of the oral proceedings before the Board. In addition, respondent 1 submitted that an objection against the method claim had not been necessary before since other objections had been made against the product of claim 1 of the requests.
- 6.5 It is however apparent that the specific feature of method claim 1 of the sixth auxiliary request now objected to was part of the method claims of all the requests submitted by the appellant since the beginning of the appeal proceedings. It is further apparent that

the same feature was also part of the method claims of all the requests decided upon by the opposition division (main request and first and second auxiliary requests). The Board thus finds that the objection submitted by respondent 1 at the end of the oral proceedings before the Board could and should have already been filed earlier during the opposition proceedings before the opposition division or with the reply to the statement setting out the grounds of appeal (Article 12(2) RPBA).

- 6.6 The remittal of the case to the opposition division to decide on the late objection of respondent 1 under Article 123(2) EPC against the sixth auxiliary request would at this stage prevent the Board from reaching a conclusion as to whether the sixth auxiliary request meets the requirements of Article 123(2) and (3) EPC. These were however the requirements that were decided upon by the opposition division and that the Board had to review in the present decision. Considering that the late objection of respondent 1 could have been filed during the opposition proceedings before the opposition division and that the objection was only raised at the very end of the appeal proceedings before the Board after the issue had already been debated and deliberated upon without a reason that would justify its filing at such a late stage, and the fact that a remittal of the sixth auxiliary request to the opposition division to decide on Article 123(2) and (3) EPC would go against the procedural economy, the Board decides not to allow the request of respondent 1 to remit the case to the department of first instance for further examination of its new Article 123(2) EPC objection against the sixth auxiliary request.

6.7 Furthermore, the Board finds that in the absence of a justification for submitting the objection at that stage and in view of all the facts analysed above, also its admittance would go against the principles of procedural economy and fairness of the procedure and decides therefore not to admit the new objection of respondent 1 under Article 123(2) EPC into the appeal proceedings.

6.8 The Board concludes from the above that the claims of the sixth auxiliary request meet the requirements of Article 123(2) and (3) EPC.

6.9 In addition, in the absence of a decision on other issues and in view of the requests of the parties, the Board finds it appropriate to remit the case to the department of first instance for analysing the further objections.

Order

For these reasons it is decided that:

7. The decision under appeal is set aside.
8. The case is remitted to the department of first instance for further prosecution on the basis of the sixth auxiliary request filed during the oral proceedings before the Board.

The Registrar:

The Chairman:



G. Nachtigall

D. Semino

Decision electronically authenticated