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**Datasheet for the decision
of 29 January 2019**

Case Number: T 0168/16 - 3.3.03

Application Number: 05780044.3

Publication Number: 1753821

IPC: C08L77/00, C08K5/00, C08K5/5313

Language of the proceedings: EN

Title of invention:

HALOGEN-FREE FLAME RETARDANT POLYAMIDE COMPOSITION WITH
IMPROVED ELECTRICAL PROPERTIES

Patent Proprietor:

SABIC Innovative Plastics IP B.V.

Opponents:

Solvay Specialty Polymers USA, LLC
EMS-PATENT AG
DSM IP Assets B.V.
Clariant Produkte (Deutschland) GmbH

Relevant legal provisions:

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

Keyword:

Amendments - allowable (no)

Late-filed request - adjournment of oral proceedings would have been required (no)



Beschwerdekammern

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Case Number: T 0168/16 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 29 January 2019

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 10 December
2015 revoking European patent No. 1753821
pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman D. Semino
Members: D. Marquis
C. Brandt

Summary of Facts and Submissions

I. The appeal lies with the decision of the opposition division posted on 10 December 2015 revoking European patent No. 1 753 821.

II. The European patent was based on PCT application WO 2005/116139 which contained 20 claims, claims 1, 4, 6, 10, 11 and 12 reading as follows:

"1. A flame-retardant polyamide composition, comprising:

about 30 to about 65 weight percent polyamide;

about 3 to about 40 weight percent of a flame retardant system comprising

i) a metal phosphinate or diphosphinate salt; and

ii) at least one nitrogen compound selected from the group consisting of benzoguanine compounds, terephthalic ester compounds of tris(hydroxyalkyl)isocyanurate, allantoin compounds, glycoluril compounds, melamine cyanurate, melamine phosphate compounds, dimelamine phosphate compounds, melamine pyrophosphate compounds, melem, melam, and combinations thereof; and

about 30 to about 70 weight percent reinforcing filler and non-reinforcing inorganic filler;

wherein all the amounts are based upon the total weight of components."

"4. The composition of claim 1, wherein the polyamide is selected from the group consisting of nylon-6, nylon-6,6, nylon-4, nylon-4,6, nylon-12, nylon-6,10, nylon-6,9, nylon-6,12, nylon-9T, copolymer of nylon-6,6 and nylon-6, polyamide copolymers, and combinations thereof."

"6. The composition of claim 1, wherein the reinforcing inorganic filler is glass fiber."

"10. The composition of claim 1, wherein the composition exhibits a rating of V0 according to UL-94 at 1.6 millimeters thickness."

"11. The composition of claim 1, wherein the composition exhibits a Glow Wire Flammability Index as measured according to IEC-60695-2-12 of 960°C or greater at 1.6 millimeter thickness."

"12. The composition of claim 1, wherein the composition exhibits a comparative tracking index measured according to International Electrotechnical Commission standard IEC-601 12/3rd of greater than about 400 Volts."

III. The European patent as granted contained 10 claims, claim 1 thereof reading as follows:

"1. A flame-retardant polyamide composition, comprising:

30 to 65 weight percent polyamide;

3 to 40 weight percent of a flame retardant system comprising

i) a metal phosphinate or diphosphinate salt; and

ii) at least one nitrogen compound selected from the group consisting of benzoguanine compounds, terephthalic ester compounds of tria(hydroxyalkyl)isocyanurate, allantoin compounds, glycoluril compounds, melamine cyanurate, melamine phosphate compounds, dimelamine phosphate compounds, melamine pyrophosphate compounds, melem, melam, and combinations thereof; and

35 to 70 weight percent reinforcing filler;

wherein all the amounts are based upon the total weight of the flame-retardant polyamide composition; wherein the composition exhibits a rating of V0 according to UL-94 at 1.6 millimeters thickness, a tensile modulus of at least 10.5 GPa measured according to ISO Standard 527/1, and a comparative tracking index measured according to International Electrotechnical Commission standard IEC-60112/3rd of greater than 400 Volts."

IV. A notice of opposition was filed in which revocation of the patent in its entirety was requested.

V. The decision of the opposition division was based on the claims as granted as the main request, on the first to twelfth auxiliary requests filed with letter of 4 September 2015, on the thirteenth auxiliary request filed on 22 October 2015 and on the fourteenth auxiliary requests filed with letter of 4 September 2015.

VI. The decision of the opposition division concluded that none of the requests submitted during the opposition procedure satisfied the requirements of Article 123(2) EPC. The decision, as far as relevant to the present decision, can be summarised as follows:

(a) There was no basis in the application as originally filed for a composition defined by a combination of flame retardancy, tensile modulus and comparative tracking index defined by the ranges of claim 1 of the main request. In particular, the requirements set out for the flame retardancy rating (claim 10) and the comparative tracking index (claim 12) were neither disclosed in combination in the claims as originally filed, nor on page 13 of the description. Furthermore, the numerical ranges limiting the flame retardancy, the comparative tracking index and the tensile modulus now part of claim 1 could not be combined with one another since they belonged to different levels of preference in the application as originally filed. Moreover, the thickness of the sample used to determine the range of the comparative tracking index given on page 13 of the application as originally filed was omitted in claim 1 of the main request.

(b) The replacement of the lower limit of the range defining the amount in filler by the value of 35 weight percent in claim 1 changed the claimed subject matter such that it was no longer possible to use any of the components at its upper limit without exceeding the 100 weight percent margin for the total of all components. That constituted an ambiguity which was not present in the application as originally filed and contravened therefore the

requirements of Article 123(2) EPC.

- (c) The replacement of the minimum value "30 weight percent" by "35 weight percent" in the range defining the amount in reinforcing filler in claim 1 did not find a basis in the last paragraph of page 10 of the description as originally filed which only pertained to the total amount of fillers present in the composition. Besides, the examples did not form the basis for the minimum amount of fillers being 35 weight percent in claim 1 because the examples illustrated the narrower scope of claim 18.
- (d) The deletion of the reference to non-reinforcing inorganic fillers extended the scope of claim 1 since the range defining the amount of fillers then only applied to reinforcing filler. The examples did not form a basis for that amendment since they only pertained to specific compositions containing specific fillers. Neither the third paragraph on page 9, nor the second paragraph on page 10 formed a suitable basis for that amendment of claim 1 either, since these passages did not mention the amounts of fillers.
- (e) The issues under Article 123(2) EPC concerning the minimum amount of filler of 35 weight percent as well as the combination of requirements concerning the flame retardancy, the tensile modulus and the comparative tracking index that affected the main request request were also relevant for the totality of the auxiliary requests.
- (f) The first to fourteenth auxiliary requests also lacked a basis since the application as originally

filed only disclosed an upper limit of 60 weight percent in the case of the total amount of filler. There was no basis for an upper limit of 60 weight percent of reinforcing filler. With respect to the tenth to fourteenth auxiliary requests, the application as originally filed did not provide a basis for the inclusion of the Glow Wire Flammability Index in combination with the flame retardancy, tensile modulus and comparative tracking index parameters in claim 1.

- VII. The proprietor (appellant) lodged an appeal against that decision. Basis for the appeal were the claims as granted as the main request or alternatively any of the first to twentieth auxiliary requests filed with the statement setting out the grounds of appeal.
- VIII. In their reply to the statement of grounds of appeal, the opponents 1 to 3 (respondents I to III) requested that the appeal be dismissed.
- IX. In a communication sent in preparation of the oral proceedings, the Board summarised the points to be dealt with and provided a preliminary view on the disputed issues.
- X. With letter of 5 November 2018, the appellant withdrew the main request and the first to eighth, tenth, twelfth, fourteenth, fifteenth and eighteenth to twentieth auxiliary requests and submitted a new main request and new first to fourth auxiliary requests.

The main request contained only one claim which corresponded to claim 1 of the ninth auxiliary request filed with the statement setting out the grounds of appeal, that claim reading:

"1. A flame-retardant polyamide composition, comprising:

40 to 65 weight percent polyamide;

3 to 40 weight percent of a flame retardant system comprising

i) a metal phosphinate or diphosphinate salt; and

ii) at least one nitrogen compound selected from the group consisting of benzoguanine compounds, terephthalic ester compounds of tria(hydroxyalkyl)isocyanurate, allantoin compounds, glycoluril compounds, melamine cyanurate, melamine phosphate compounds, dimelamine phosphate compounds, melamine pyrophosphate compounds, melem, melam, and combinations thereof; and

35 to 60 weight percent reinforcing filler;

wherein all the amounts are based upon the total weight of the flame-retardant polyamide composition; wherein the composition exhibits a rating of V0 according to UL-94 at 1.6 millimeters thickness, a tensile modulus of at least 10.5 GPa measured according to ISO Standard 527/1, and a comparative tracking index measured according to International Electrotechnical Commission standard IEC-60112/3rd of greater than 400 Volts".

Claim 1 of the first auxiliary request was the only claim thereof, corresponded to claim 1 of the eleventh auxiliary request filed with the statement setting out

the grounds of appeal and differed from claim 1 of the main request in that the flame-retardant polyamide composition was additionally defined by having "a Glow Wire Flammability Index as measured according to IEC-60695-2-12 of 960°C or greater at 1.6 millimeter thickness".

Claim 1 of the second auxiliary request was the only claim thereof, corresponded to claim 1 of the thirteenth auxiliary request filed with the statement setting out the grounds of appeal and differed from claim 1 of the first auxiliary request in that the following wording was added at the end of the claim: "wherein the 40 to 65 weight percent polyamide consists of nylon 6 or a combination of nylon 6 and nylon 6,6".

Claim 1 of the third auxiliary request was the only claim thereof, corresponded to claim 1 of the sixteenth auxiliary request filed with the statement setting out the grounds of appeal and differed from claim 1 of the main request in that the following wording was added "wherein said 35 to 60 weight percent of reinforcing filler is glass fiber", and in that the tensile modulus was measured "on specimens having a thickness of 4.0 millimeters" and the comparative tracking index was measured "on specimens having a thickness of 4.0mm and a diameter of a minimum of 60.0mm" and was "greater than 600 Volts".

Claim 1 of the fourth auxiliary request was the only claim thereof, corresponded to claim 1 of the seventeenth auxiliary request filed with the statement setting out the grounds of appeal and differed from claim 1 of the third auxiliary request in that the following wording was added "wherein the 40 to 65 weight percent polyamide consists of nylon 6 or a

combination of nylon 6 and nylon 6,6".

- XI. With letter of 3 December 2018, the appellant declared that they would not attend the oral proceedings arranged for 29 January 2019 by the Board.
- XII. With letter of 14 December 2018, opponent 4 (respondent IV) declared that they would not attend the oral proceedings.
- XIII. Oral proceedings were held on 29 January 2019.
- XIV. The arguments provided by the appellant in writing, as far as relevant to the present decision, can be summarised as follows:

Admittance of the main request and first to fourth auxiliary requests

- (a) The main request was based on the ninth auxiliary request filed with the statement setting out the grounds of appeal from which the dependent claims has not been deleted. In the same manner, the first to fourth auxiliary request were based on the eleventh, thirteenth, sixteenth and seventeenth auxiliary requests filed with the statement setting out the grounds of appeal. The amendments performed in these requests did not change the legal and factual scope of the appeal and did not change the discussion on the matter of compliance with the requirements of Article 123(2) EPC. The main request and first to fourth auxiliary requests should therefore be admitted into the proceedings.

Main request

Amendments

- (b) The combination of conditions applying to the parameters relating to flame retardancy (V0 rating according to UL-94 at 1.6 millimeters thickness), tensile modulus (of at least 10.5 GPa measured according to ISO Standard 527/1) and comparative tracking index (of greater than 600 Volts measured according to International Electrotechnical Commission standard IEC-60112/3rd on specimens having a thickness of 4.0mm and a diameter of a minimum of 60.0mm) was directly and unambiguously derivable from the application as originally filed even in the absence of a literal basis for that combination.

- (c) The introduction of the application as originally filed taught compositions that met certain threshold values of flame retardancy, good mechanical properties and arc tracking resistance. The conditions relating to these properties and laid out in claims 10, 12 and on page 13 of the application as originally filed could thus not be considered as being separate embodiments. The paragraphs on page 13 relating to the conditions now part of claim 1 had to be read in a broader context of the application and formed a single concept.

- (d) In particular, claims 10 and 12 provided a basis for the flame retardancy and the comparative tracking index. The fact that the claims as originally filed were drafted in a style avoiding multiple dependency did not mean that combinations of features belonging to different claims were not

foreseen.

- (e) Page 13 of the application as originally filed not only contained a discussion of the tensile modulus but also of the flame retardancy and of the comparative tracking index. The reference to embodiments in that passage was not meant to indicate that the ranges defining these parameters were mutually exclusive. On the contrary, it was clear from the general context of the application that the compositions broadly disclosed in the description could fulfil any of these conditions.
- (f) The examples clearly supported this interpretation as for all compositions of the examples and comparative examples these parameters were measured and reported. Even if some of the examples did not satisfy all the conditions simultaneously, the combination of parameters as set out in claim 1 found a basis in the application as originally filed.

Auxiliary requests

Amendments

- (g) Claim 1 of the first auxiliary request differed from claim 1 of the main request in that the Glow Wire Flammability Index was 960°C or greater. In addition to the basis for the main request, reference was made to claim 11 as filed. Claim 1 of the first auxiliary request met therefore the requirements of Article 123(2) EPC.
- (h) Claim 1 of the second auxiliary request differed from claim 1 of the main request in that it

required that the Glow Wire Flammability Index to be 960°C or greater and the polyamide to consist of nylon 6 or a combination of nylon 6 and nylon 6,6. Basis for these additional limitations was found in original claim 11 and page 3, third paragraph read in conjunction with the examples. The second auxiliary request met therefore the requirements of Article 123(2) EPC.

(i) Claim 1 of the third auxiliary request differed from claim 1 of the main request in that it required the reinforcing filler to be glass fiber and in that the comparative tracking index was at least 600 Volts. Some details on the specimen dimensions were also included in the claim. The basis for these additional limitations was on page 2, line 15, where it was mentioned that the invention concerned fiber reinforced compositions, and also in the examples which only disclosed glass fiber reinforced compositions. The test specimen dimensions was disclosed on page 13. The third auxiliary request met therefore the requirements of Article 123(2) EPC.

(j) Claim 1 of the fourth auxiliary request resulted from the combination of the limitations of the third auxiliary request (for the type of reinforcing filler and test specimen dimensions) and the second auxiliary request (for the type of polyamide). The fourth auxiliary request met the requirements of Article 123(2) EPC.

XV. The arguments of respondents I to III, as far as relevant to the present decision, can be summarised as follows:

Admittance of the main request and first to fourth auxiliary requests

- (a) None of the amendments made in the requests on file addressed the objections under Article 123(2) EPC discussed in appeal. These requests, which were late filed in appeal should not be admitted into the proceedings.
- (b) The deletion of all dependent claims in all the requests was not caused by a ground of opposition. The main request and first to fourth auxiliary requests should not be allowed into the proceedings as they did not meet the requirements set forth in Rule 80 EPC.

Main request

Amendments

- (c) The combination of conditions set out for the flame retardancy, the tensile modulus and the comparative tracking index in claim 1 of the main request was not disclosed in the application as originally filed. Claim 1 of the main request did not meet on this basis the requirements of Article 123(2) EPC.
- (d) In particular, claim 10 relating to the flame retardancy and claim 12 relating to the comparative tracking index were solely dependent on claim 1 relating to the general composition. The combination of the subject matter of claims 10 and 12 was thus not disclosed in the claims as originally filed.

- (e) The passage of the description on page 13 disclosed each condition regarding the flame retardancy, the tensile modulus and the comparative tracking index in independent embodiments. That passage did therefore not provide a basis for claim 1 of the main request.

- (f) The introductory passage on page 2 of the description was vague and did not disclose the conditions as set forth in claim 1 of the main request. Neither that passage, nor any other passage of the application as originally filed, supported a broad interpretation of the individual conditions set out for the embodiments disclosed on page 13.

Auxiliary requests

Amendments

- (g) The arguments laid out for the combination of parameters present in claim 1 of the main request also applied to claim 1 of each of the first to fourth auxiliary requests. The further limitations regarding the polyamide, the reinforcing filler and the Glow Wire Flammability Index added to the auxiliary requests did not solve the objection made under Article 123(2) EPC of the main request.

- (h) There was, in addition, no support for a combination including the condition regarding the Glow Wire Flammability Index as now present in claim 1 of the first auxiliary request.

- (i) There was also no basis for the combination of parameters as claimed in the second auxiliary

request in the context of the polyamide consisting of nylon 6 or a combination of nylon 6 and nylon 6,6.

(j) There was no basis for a composition defined by the combination of parameters set out in claim 1 of the third auxiliary request and for which the reinforcing filler was defined as being glass fiber.

(k) The objections laid out against the second and third auxiliary requests also applied to the fourth auxiliary request since that last request contained the amendments introduced both in the second and third auxiliary requests.

XVI. The appellant requested in writing that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution on the basis of the amended main request or, alternatively, on the basis of any of first to fourth auxiliary requests, all requests filed with letter dated 5 November 2018.

Respondents I, II and III requested that the appeal be dismissed. Respondents I and II further requested that the requests filed with letter dated 5 November 2018 not be admitted into the proceedings.

Respondent IV did not submit any requests or arguments in the appeal proceedings.

Reasons for the Decision

1. Although having been duly summoned the appellant and respondent IV did not attend the oral proceedings.

According to Rule 115(2) EPC and Article 15(3) RPBA, proceedings were continued without these parties.

2. Admittance of the main request and first to fourth auxiliary requests into the proceedings
- 2.1 The main request and the first to fourth auxiliary requests correspond to the ninth, eleventh, thirteenth, sixteenth and seventeenth auxiliary requests that were filed with the statement setting out the grounds of appeal and from which all claims but claim 1 were deleted. The main request and the first to fourth auxiliary requests correspond therefore in substance to previously filed requests. The admittance of these requests into the proceedings does not introduce new issues which the Board or the other party or parties cannot reasonably be expected to deal with without adjournment of the oral proceedings. Restricting the requests to a smaller number thereof each having a single claim already present in previous requests also contributes to the procedural economy.
- 2.2 On that basis the Board finds it appropriate to exercise its discretion according to Article 13(1) RPBA by admitting the main request and the first to fourth auxiliary requests into the proceedings.
- 2.3 An objection against the admittance of all requests into the proceedings was also raised by respondent I under Rule 80 EPC on the grounds that the deletion of the dependent claims from all the requests could not be seen as having been made to overcome an objection based on a ground for opposition as specified in Article 100 EPC. The objection under Rule 80 EPC however was raised for the first time at the oral proceedings before the Board which took place in the absence of the appellant.

Under these circumstances and in view of the negative conclusion reached on all requests as to the requirements of Article 123(2) EPC, it is not necessary for the Board to decide on that point.

Main request

3. Amendments

3.1 Claim 1 of the application as originally filed defined a flame retardant polyamide composition by the nature and the amounts of the components that were contained therein, namely polyamide, a flame retardant system comprising two components and reinforcing and non-reinforcing inorganic fillers. In claim 1 of the main request, apart from other amendments, the flame retardant polyamide composition is additionally defined in that it exhibits:

- (a) a rating of V0 according to UL-94 at 1.6 millimeters thickness,
- (b) a tensile modulus of at least 10.5 GPa measured according to ISO Standard 527/1, and
- (c) a comparative tracking index measured according to International Electrotechnical Commission standard IEC-60112/3rd of greater than 400 Volts.

3.2 Regarding the introduction of this combination of conditions concerning the flame retardancy (a), the tensile modulus (b) and the comparative tracking index (c) as set out already in claim 1 as granted, the appellant has referred to claims 10 and 12, to the passages on page 2 and 13 and to the examples of the application as originally filed.

3.3 Claim 10 as originally filed discloses condition (a) and claim 12 as originally filed discloses condition

(c) as now part of claim 1 of the main request, but both claims 10 and 12 are solely dependent on claim 1 as originally filed. Since claims 10 and 12 are independent from one another, their subject matter is not disclosed in combination in the claims. As a consequence, claims 10 and 12 cannot form a proper basis for the combination of the conditions (a) and (c) as set out in claim 1 of the main request. Besides, none of the claims of the application as originally filed mentions condition (b) regarding the tensile modulus. Under these circumstances, there is no explicit nor implicit disclosure in the claims as originally filed of a flame retardant polyamide composition fulfilling all three conditions (a), (b) and (c) simultaneously.

3.4 The flame retardancy, the comparative tracking index and the tensile modulus properties of flame retardant polyamide compositions are discussed on page 13 of the application as originally filed. In fact, these three properties are disclosed separately in different paragraphs of page 13 (paragraphs 2, 3 and 5). Also, the formulation of each of these three paragraphs further defining conditions (a), (b) and (c) respectively indicates that these conditions concern alternative and distinct embodiments of the flame retardant polyamide compositions. Under these circumstances, it cannot be directly and unambiguously derived from the passages on page 13 that protection was sought for a composition fulfilling all three conditions (a), (b) and (c) simultaneously as now defined in claim 1 of the main request. Furthermore, the description of the application as originally filed does not establish the existence of a relation between the flame retardancy, the tensile modulus and the comparative tracking index in the context of the

claimed compositions. There was thus no reason to consider that the combination of the specific conditions (a), (b) and (c) could constitute a single concept of flame retardant polyamide compositions upon reading the description as originally filed.

3.5 The passage on page 2 (first full paragraph) of the description cited in addition by the appellant, while it suggests the "need for halogen-free flame retardant polyamide compositions that exhibit good flame retardant properties, excellent arc tracking resistance properties, while at the same time retaining good mechanical properties" is vague as far as the properties of the flame retardant composition are concerned and that passage does not pertain to the specific conditions limiting the flame retardancy, the tensile modulus or the comparative tracking index as now claimed. In that respect, it was not contested that the flame retardant polyamide compositions according to claim 1 of the application as originally filed could be characterized by their flame retardancy, tensile modulus and comparative tracking index at all, but the question was rather whether the application as originally filed provided a basis for a composition fulfilling the three specific conditions (a), (b) and (c) in combination as defined above under 3.1. Since the passage on page 2 does not concern these conditions and does not establish a direct link between the conditions disclosed on page 13, it cannot provide a basis for amended claim 1 of the main request.

3.6 The examples of the application as originally filed were also cited as a basis for the introduction of the conditions (a), (b) and (c) in claim 1 of the main request. Among the 14 examples provided in Tables 4 and 5 of the application as originally filed, only two

examples (example 19 and example 26) actually fall under the subject matter of claim 1 of the main request, since they are the only examples containing between 40 and 65 weight percent of polyamide as defined in claim 1 and satisfying conditions (a), (b) and (c) simultaneously. While examples 19 and 26 formally do fall under claim 1 of the main request, there is however in the discussion of the examples no direct and unambiguous teaching that protection was specifically sought for compositions satisfying the three conditions (a), (b) and (c) in combination. The possible presence of a pointer to the combination of the three conditions (a), (b) and (c) is actually even weakened by the data reported in Tables 4 and 5, since the compositions of the examples are not only characterized by their tensile modulus, comparative tracking index and flammability rating according to UL-94 at 1.6 millimeters thickness, but are also characterized by a number of other properties, such as the tensile strength, Izod notched Impact, Glow Wire Flammability Index and flammability rating according to UL-94 at 0.8 millimeters thickness. In that respect, in order for the requirements of Article 123(2) EPC to be met, it is not sufficient that a given concept defined in the amended claim be formally supported by some of the examples of the application as originally filed but it is necessary that that concept, in the present case the fulfilment of the three conditions (a), (b) and (c) in combination, be directly and unambiguously recognizable as such from the application itself.

3.7 Also, the two flame retardant polyamide compositions of examples 19 and 26 share a number of very specific features (polyamide 6, chopped glass fiber, Exolit OP 1312 as flame retardant system) from which it cannot be inferred that the compositions can be generalized to

the subject matter of claim 1 of the main request and still fulfill the three conditions (a), (b) and (c). The examples of the application as originally filed therefore do not provide a basis for claim 1 of the main request.

- 3.8 Under these circumstances, the Board concludes that claim 1 of the main request does not meet the requirements of Article 123(2) EPC. Other objections relating to the amendment of the range defining the amount in filler and the deletion of the non-reinforcing inorganic filler from the definition of the composition in claim 1 of the main request that were part of the contested decision (see items (b) to (e) in point VI above) were also debated in appeal and were addressed in the preliminary opinion where the concerns of the Board were expressed (see points 8.3 to 8.5 therein). Since the Board however already concluded that claim 1 of the main request does not meet the requirements of Article 123(2) EPC on the grounds that the application as originally filed did not provide a basis for the combination of conditions (a), (b) and (c) in claim 1, there is no need to analyse the other objections in any further details.

First to fourth auxiliary requests

4. Amendments
- 4.1 Claim 1 of the first auxiliary request corresponds to claim 1 of the main request with the addition of a further condition relating to the Glow Wire Flammability Index as measured according to IEC-60695-2-12 being 960°C or greater at 1.6 millimeter thickness. That additional condition must be fulfilled by the flame retardant polyamide composition in

addition to the three conditions (a), (b) and (c) dealt with above.

4.2 The Glow Wire Flammability Index is a further property of the flame retardant polyamide composition that was disclosed in claim 11 and on page 13 of the application as originally filed. In the same manner as claims 10 and 12, claim 11 as originally filed was only dependent on claim 1 such that its subject matter is not disclosed in combination with that of claims 10 or 12. There is thus no basis for a combination of the numerical range of Glow Wire Flammability Index with any of the conditions (a), (b) or (c) discussed earlier under point 3 in the claims as originally filed. The Glow Wire Flammability Index is also discussed in paragraph 4 on page 13 and is reported in the examples of the application as originally filed, but as for the conditions (a), (b) and (c), the application does not directly and unambiguously establish that the condition applying to the Glow Wire Flammability Index (value of greater than 960°C at 1.6 millimeter thickness) is linked to or can be read with the conditions (a), (b) and (c) also defining claim 1 of the first auxiliary request. Under these circumstances, the Board comes to the conclusion that claim 1 of the first auxiliary request does not meet the requirements of Article 123(2) EPC for the same reasons outlined for claim 1 of the main request.

4.3 Claim 1 of the second auxiliary request corresponds to claim 1 of the first auxiliary request with the further limitation of the polyamide present in the composition to nylon 6 or a combination of nylon 6 and nylon 6,6. Nylon 6 and the combination of nylon 6 and nylon 6,6 are two of the polyamides disclosed in a list of polyamides disclosed in claim 4 and in the third

paragraph on page 3 of the application as originally filed. Since claim 4 as originally filed was solely dependent on claim 1, the limitation of polyamide to nylon 6 or a combination of nylon 6 and nylon 6,6 represents a further selection that must be performed in the claims in order to arrive at the subject matter of claim 1 of the second auxiliary request. The choice of nylon 6 or a combination of nylon 6 and nylon 6,6 as polyamide in the description of the application as originally filed is not linked to specific properties of the composition and more specifically, it does not imply a composition fulfilling the three set of conditions (a), (b) and (c) in combination with the range of Glow Wire Flammability Index as now claimed. Under these circumstances, the limitation of polyamide to nylon 6 or a combination of nylon 6 and nylon 6,6 does not alter the reasoning concerning the lack of basis of claim 1 of the first auxiliary request in the application as originally filed. The Board thus concludes that claim 1 of the second auxiliary request does not meet the requirements of Article 123(2) EPC.

4.4 By comparison to claim 1 of the main request, claim 1 of the third auxiliary request differs in that the reinforcing filler is limited to glass fiber, the thickness of the specimen used to measure the tensile modulus is said to be of 4 millimeters and the comparative tracking index is further defined as being measured on specimens having a thickness of 4.0mm and a diameter of a minimum of 60.0mm and being greater than 600 Volts.

4.5 The limitation regarding the reinforcing filler being glass fiber can be found in claim 6 and in paragraph 4 on page 9 of the application as originally filed. Neither in claim 6 as originally filed, which is solely

dependent on claim 1, nor in the description is there a teaching that the limitation of the reinforcing filler to a glass fiber is in any way related to compositions fulfilling the combination of conditions (a), (b) and (c) as mentioned above. Also, the limitation of the range defining the comparative tracking index to values greater than 600 Volts, which is based on a preferred range disclosed in paragraph 3 on page 13, does not constitute a basis for the combination of features and more specifically the combination of conditions (a), (b) and (c) specified in claim 1 of the third auxiliary request. In that regard, the limitation of the specimen thickness to 4 millimeters for the determination of the tensile modulus and the comparative tracking index, as disclosed on page 13, does not alter that conclusion. Claim 1 of the third auxiliary request does therefore not meet the requirements of Article 123(2) EPC for the same reasons as outlined for the previous requests.

- 4.6 Claim 1 of the fourth auxiliary request differs from claim 1 of the third auxiliary request in that the polyamide of the composition is limited to nylon 6 or a combination of nylon 6 and nylon 6,6. As noted above under point 4.3, the limitation of polyamide to nylon 6 or a combination of nylon 6 and nylon 6,6 according to claim 4 as originally filed or the third passage of page 3 is not linked to specific properties of the composition. More specifically, that limitation is not disclosed in combination with the three set of conditions (a), (b) and (c) as defined in claim 1 of the fourth auxiliary request. The Board thus concludes that claim 1 of the fourth auxiliary request does not meet the requirements of Article 123(2) EPC for the same reasons as outlined for the previous requests.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



B. ter Heijden

D. Semino

Decision electronically authenticated