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**Datasheet for the decision  
of 11 December 2006**

**Case Number:** T 1059/03 - 3.3.03

**Application Number:** 88115967.7

**Publication Number:** 0310924

**IPC:** C08L 71/12

**Language of the proceedings:** EN

**Title of invention:**

Stabilized polyphenylene ether polyamide compositions

**Patentee:**

GENERAL ELECTRIC COMPANY

**Opponent:**

Asahi Kasei Kogyo Kabushiki Kaisha

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 123(2)

**Keyword:**

"Amendment - added subject-matter - yes"

**Decisions cited:**

T 0201/83, T 0714/00

**Catchword:**

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Case Number: T 1059/03 - 3.3.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.03  
of 11 December 2006

**Appellant:** Asahi Kasei Kogyo Kabushiki Kaisha  
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**Respondent:** GENERAL ELECTRIC COMPANY  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
31 July 2003 concerning maintenance of European  
patent No. 0310924 in amended form.

**Composition of the Board:**

**Chairman:** C. Idez  
**Members:** M. Gordon  
H. Preglau

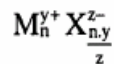
## Summary of Facts and Submissions

- I. Mention of the grant of European patent No. 0 310 924 in the name of the General Electric Company in respect of European patent application No. 88 115 967.7 filed on 28 September 1988, claiming priority of US patent application 107621 dated 9 October 1987 was announced on 18 August 1999 (Bulletin 1999/33) on the basis of eight claims.

Claim 1 read as follows:

"1. A thermoplastic composition having improved retention of physical properties upon thermal aging comprising:

- a. a compatible polyphenylene ether-polyamide resin blend comprised of, approximately 5 to 95 parts by weight polyphenylene ether resin, and 95 to 5 parts by weight polyamide resin; and
- b. approximately 0.001 to 0.5 parts by weight per 100 parts of resin composition a. of a metal salt of the formula



where M represents a metal ion selected from the group consisting of copper, nickel, tin and cerium, n is an integer of from 1 to 6, X is an ion radical selected from the group consisting of halide ion and carboxylate ion, y is an integer representing the positive ionic charge of M and z is an integer representing the negative ionic charge of X."

Dependent claims 2 to 8 defined preferred embodiment of the composition of claim 1.

II. A notice of opposition was filed on 20 March 2000 by Asahi Kasei Kogyo invoking the grounds of Article 100(a) EPC specifically that the subject matter claimed was neither novel (Article 54 EPC) nor inventive (Article 56 EPC). Revocation of the patent was requested.

III. In a decision announced orally on 7 February 2003 and issued in writing on 31 July 2003 the opposition division held that the patent could be maintained in amended form on the basis the second auxiliary request as submitted during the oral proceedings of 7 February 2003. Claim 1 of this request read as follows:

"1. A thermoplastic composition having improved retention of physical properties upon thermal aging comprising:

- a. a compatible polyphenylene ether-polyamide resin blend comprised of, approximately 5 to 95 parts by weight polyphenylene ether resin, and 95 to 5 parts by weight polyamide resin; and
- b. **0.02 to 0.056** parts by weight per 100 parts of resin composition a. of **CuI**." (emphasis as in the submitted claim).

Dependent claims 2 to 5 defined preferred embodiments of the composition of claim 1.

IV. A notice of appeal against this decision was filed by the opponent on 25 September 2003, the requisite fee being paid on the same day.

The appellant requested that the decision of the opposition division be set aside and the patent be

revoked. An auxiliary request was made for oral proceedings.

V. The statement of grounds of appeal was received on 4 December 2003.

Objections pursuant to Articles 56, 84 and 123(2) EPC were raised.

It was argued that the range of stabiliser CuI of 0.02 to 0.056 parts by weight according to claim 1 violated Article 123(2) EPC since the limiting values of the range were not originally disclosed.

Claim 1 as maintained by the opposition division related the amount of CuI to 100 parts of resin composition a. The patentee had submitted that the limiting values to this range were based on the examples of Tables 1 and 2 of the patent. However in the examples of Tables 1 and 2 the amounts of CuI were based on 90 parts by weight of resin a. and according to Table 4 they were based on 85 parts by weight of resin composition a.

Submissions were also made in respect of the objections pursuant to Articles 56 and 84 EPC.

VI. In a response dated 6 April 2004 the proprietor, now respondent, submitted two sets of claims as a main and first auxiliary request, each consisting of five claims.

The main request differed from that upon which the opposition division decided the patent could be maintained in that the amount of CuI was specified as from 0.022 to 0.066 parts by weight per 100 parts resin composition a. According to the auxiliary request this range was 0.022 to 0.056 parts by weight.

The respondent acknowledged that the appellant was correct in the observation that the values of the

amounts of CuI in the examples of the application did not refer to 100 parts by weight of resin composition a. It was submitted that this defect had been remedied by the main request. In this request the lower limit of the CuI concentration had been taken from examples 5 and 8, the upper limit from example 13.

With regard to the auxiliary request it was submitted that the lower limit was derived from examples 5 and 8, the upper limit being taken from examples 3, 4, 7, 9 and 10. All of these examples related to the same basic resin composition.

Arguments in respect of the objections pursuant to Articles 56 and 84 EPC were also submitted.

- VII. In a further submission dated November 16, 2004 the appellant submitted that the arguments advanced in the statement of grounds of appeal applied to both of the newly filed main and auxiliary requests. Thus the objections raised were maintained.
- VIII. In a letter dated 31 August 2005 the respondent made an auxiliary request for oral proceedings.
- IX. In a communication dated 4 October 2005 the board expressed its preliminary, provisional opinion that the main and auxiliary requests contravened Article 123(2) EPC. In particular it was noted that the manner in which the content of CuI was expressed in the examples of the application as originally filed and the patent was not consistent. Examples 1-7, 12 and 13 reported "parts by weight" whereas examples 8 and 9 reported "%". The relationship between these two groups of examples was not explained. In particular the basis of

calculation of the "%" of CuI in examples 8 and 9 was not elucidated.

With respect to the examples it was further noted that the presence of CuI did not necessarily and inevitably result in an improvement in the heat stability. Rather the other components present, the moulding and aging conditions and the measurement method employed all influenced the result and conclusions. Thus the isolation and generalisation of the single feature of CuI content from the examples contravened Article 123(2) EPC (following T 201/83, OJ EPO 1984, 481 and T 714/00, 6 August 2002 not published in the OJ EPO).

- X. In a letter dated 10 February 2006 the appellant indicated agreement with the preliminary opinion expressed by the board.
  
- XI. Together with a letter dated 21 March 2006 the respondent filed a new main and first auxiliary request.

Claim 1 of the main request had the following wording:

"1. A thermoplastic composition having improved retention of physical properties upon thermal aging comprising:

- a. a compatible polyphenylene ether-polyamide resin blend comprised of, approximately 5 to 95 parts by weight polyphenylene ether resin, and 95 to 5 parts of by weight polyamide resin; and
- b. **0.02 to 0.05% of CuI.**"

Claim 1 of the first auxiliary request read as follows:

"1. A thermoplastic composition having improved retention of physical properties upon thermal aging comprising:

- a. a compatible polyphenylene ether-polyamide resin blend comprised of, polyphenylene ether resin, and polyamide resin **in a ratio by weight of 49 to 41;** and
- b. **0.02 to 0.05% of CuI.**" (emphasis in both cases as in the submitted claims).

Both requests further contained dependent claims 2 to 5 directed to preferred embodiments of the composition of the respective claims one.

In the discussion of inventive step the respondent stated *inter alia* that examples 4, 8 and 9 would disclose quantities of CuI of 0.02 to 0.05%.

- XII. The board issued on 13 July 2006 a summons to attend oral proceedings. In the accompanying communication it was stated that the newly filed requests failed to address the objections previously indicated by the board.
- XIII. In a letter dated 10 October 2006 the respondent stated that it would not be attending the oral proceedings and withdrew its request for oral proceedings.
- XIV. In a letter dated 30 October 2006 the appellant reiterated the request for revocation of the patent and the auxiliary request for oral proceedings. Arguments with respect to the issues of Article 56 EPC, Article 84 EPC, and Article 123(2) EPC were advanced.



In particular it was submitted with respect to both the main and auxiliary requests that the proprietor had failed to address the question raised in the board's communication of 4 October 2005 concerning the basis of calculation of the "% CuI". It was further noted that in its submissions with respect to examples 4, 8 and 9 the respondent had equated "ppm by weight" (disclosed in the patent is in fact "parts by weight") in relation to 90 parts by weight resin blend of example 4 of Table 1 with the "0.02 to 0.05%" of examples 8 and 9. However the parts by weight of CuI disclosed in Table 1 did not correspond to "%" since they were related to 90 parts of the resin blend. Thus - notwithstanding that there was no basis for the "%" in both claims 1 - the exact lower boundary of claim 1 of both requests (0.02 % CuI) was not disclosed by the examples.

XV. In a communication dated 6 November 2006 the board informed the parties that the oral proceedings were cancelled.

XVI. The final requests of the parties are:

The appellant requests that the decision under appeal be set aside and in the patent be revoked. Oral proceedings are requested as an auxiliary measure.

The respondent requests that the patent be maintained in amended form on the basis of the set of claims filed as the main request (claims 1 to 5), auxiliarily on the basis of the set of claims filed as the auxiliary request (claims 1 to 5), both requests filed with the letter dated 21 March 2006.

## Reasons for the Decision

1. The appeal is admissible.
2. *Main request- Article 123(2) EPC.*
  - 2.1 Claim 1 of the main request is recited above in section XI. The first two parts of the claim, namely the features "A thermoplastic composition..." and the definition of component "a." correspond verbatim to claim 1 as originally filed.  
Feature "b." of claim 1 of the main request specifies the presence of 0.02 to 0.05 % of CuI.  
Claim 1 as originally filed specified "... approximately 0.001 to 0.5 parts by weight **per 100 parts of resin** composition a. [of a metal salt of a defined formula]" (emphasis added by the board). According to claim 3 of the application as originally filed this metal salt could be, *inter alia* CuI.  
No other amounts of the additive are disclosed in the claims or in the general part of the description of the application as originally filed.  
Therefore the general text of the description and the claims of the application as originally filed do not provide a basis for the content of CuI now defined in claim 1.
  - 2.2 Examples 8 and 9 of the application as originally filed and of the patent relate to blends that are stated to contain 0.02% CuI and 0.05% CuI respectively.  
The blends are defined by reference to a foregoing "Table 1". In the information relating to this table, in particular on page 4, starting at line 45 of the

application as originally filed it is disclosed that the blends were prepared by melt blending: 49 parts of a defined polyphenylene ether, 41 parts of a defined polyamide and 10 parts of a SBS triblock elastomer. The sum of these three components thus yields 100 parts.

The employed amounts of further additives is reported in the text associated with "Table 1" also as "parts". From the fact that the amounts of the three polymer components add up to a total of 100 parts it is apparent that the amounts of additive are defined as parts **in addition** to the 100 parts of the polymer components. Since the basis for the additional "parts" is 100 parts of the resin composition, it is also apparent that in this particular case the "parts" of additives are equivalent to percentages based on the resin composition.

Thus the compositions of examples 8 and 9 contain 0.02 and 0.05 parts (or %) of CuI respectively per 100 parts of the entire base blend (of the three polymers named above). However only 90 parts of this blend is formed from the polymers defined in claim 1. Thus expressed as percentages based on the content (90 parts) of polyphenylene ether and polyamide present in the exemplified compositions, the employed amounts of 0.02 and 0.05 parts of CuI, correspond to 0.022% and 0.056% respectively.

Examples 3, 4, 5 and 7 also disclose compositions containing CuI in amounts of 0.02 (example 5) or 0.05 (examples 3, 4 and 7) parts by weight, again based on 90 parts by weight of polyphenylene ether and polyamide. The content of CuI in these examples

expressed in percentage terms thus also corresponds of 0.022 and 0.056%.

Thus none of the examples of the application as filed provide a basis for the limiting values of the range of CuI as specified in claim 1 of the main request.

2.3 Since the amount of CuI defined in claim 1 of the main request is not disclosed in the application as originally filed, this claim does not meet the requirements of Article 123(2) EPC.

2.4 Thus the main request must be refused.

3. *First auxiliary request - Article 123(2) EPC.*

3.1 Claim 1 of the first auxiliary request differs from claim 1 of the main request in that it is specified that the polyphenylene ether resin and polyamide resin are present in the blend in a weight ratio of 49 to 41. This feature is disclosed in examples 1-11 of the application as originally filed and the patent in suit.

3.2 Claim 1 of the first auxiliary request further specifies that the composition contains 0.02 to 0.05% of CuI.

As explained in the case of the main request (section 2.2. above) this feature is not disclosed in the application as originally filed.

3.3 Thus the first auxiliary request does not meet the requirements of Article 123(2) EPC and must be refused.

4. The appellant requested oral proceedings for the case that the board intended to dismiss the appeal. The respondent withdrew its request for oral proceedings.  
As the board follows the request of the appellant for revocation of the patent, it was not necessary to hold oral proceedings.

## **Order**

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

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

The Registrar:

The Chairman:

E. Görgmaier

C. Idez