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**Datasheet for the decision  
of 13 November 2019**

**Case Number:** T 2695/16 - 3.3.03

**Application Number:** 02011786.7

**Publication Number:** 1347012

**IPC:** C08L27/16, C08J3/24, C08K5/00

**Language of the proceedings:** EN

**Title of invention:**  
Curable Fluoroelastomers

**Patent Proprietor:**  
Solvay Specialty Polymers Italy S.p.A.

**Opponent:**  
3M Innovative Properties Company

**Relevant legal provisions:**  
EPC Art. 123(2)

**Keyword:**  
Amendments - allowable (yes)



**Beschwerdekammern**

**Boards of Appeal**

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Case Number: T 2695/16 - 3.3.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.03**  
**of 13 November 2019**

**Appellant:** 3M Innovative Properties Company  
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**Decision under appeal:** **Interlocutory decision of the Opposition**  
**Division of the European Patent Office posted on**  
**14 October 2016 concerning maintenance of the**  
**European Patent No. 1347012 in amended form.**

**Composition of the Board:**

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

## Summary of Facts and Submissions

I. The appeal by the opponent lies against the decision of the opposition division posted on 14 October 2016 concerning the maintenance of European patent No. 1 347 012 in amended form according to the main request filed during the oral proceedings on 21 September 2016.

II. The application as originally filed contained 29 claims, independent claim 1 reading as follows:

"1. Fluoroelastomers curable by ionic route based on vinylidene fluoride (VDF) comprising:

a) 100 parts by weight of fluoroelastomer based on vinylidene fluoride (VDF) substantially polar end group free;

b) from 0.05 to 5 phr of accelerant;

c) from 0.5 to 15 phr of curing agent;

d) from 1 to 40 phr of one or more inorganic acid acceptors, preferably bivalent metal oxides;

e) from 0 to 2.5 phr, preferably from 0 to 1.5 phr of one or more basic compounds preferably hydroxides of bivalent metals or of weak acid metal salts;

f) from 0 to 80 phr of reinforcing fillers."

III. The main request contained 29 claims, independent claim 1 reading as follows:

"1. Fluoroelastomers curable by ionic route based on vinylidene fluoride (VDF) comprising:

a) 100 parts by weight of fluoroelastomer based on VDF and having an amount of polar end groups that has to be lower than 3% by moles with respect to the total amount of the end groups present in the polymer;

b) from 0.05 to 5 phr of accelerant;

c) from 0.5 to 15 phr of curing agent;

d) from 1 to 40 phr of one or more inorganic acid acceptors;

e) from 0 to 2.5 phr of one or more basic compounds;

f) from 0 to 80 phr of reinforcing fillers,

and wherein:

- the composition comprises from 1 to 40 phr of one or more inorganic acid acceptors selected from bivalent metal oxides; and

- the composition comprises from 0 to 2.5 phr of one or more basic compounds selected from hydroxides of bivalent metals and weak acid metal salts."

IV. The decision of the opposition division, as far as it is relevant to the present appeal, can be summarized as follows:

Article 123(2) EPC

(a) The limitation of the inorganic acid acceptors d) to bivalent metal oxides and the limitation of the basic compounds e) to hydroxides of bivalent metals

and weak acid metal salts found a basis in claim 1 as originally filed.

(b) The use of hydroxides of bivalent metals and weak acid metal salts as basic compounds in claim 1 of the application as originally filed was not limited to the preferred amount range of 0-1.5 phr. The wording of claim 1 as originally filed constituted a basis for the presence of bivalent metals and weak acid metal salts in an amount of 0-2.5 phr in the fluoroelastomers.

(c) The combination of the limitations regarding the inorganic acceptors, the basic compounds and the fluoroelastomer based on VDF in claim 1 of the main request found a basis in claim 1 and in paragraph 11 of the application as originally filed.

V. The opponent (appellant) lodged an appeal against that decision.

VI. With its rejoinder to the statement of grounds of appeal, the patent proprietor (respondent) requested that the appeal be dismissed or, in the alternative, that the patent be maintained on the basis of any one of the first to eight auxiliary requests filed therewith.

VII. Issues to be discussed at the oral proceedings were specified by the Board in a communication.

VIII. Oral proceedings were held on 13 November 2019.

IX. The appellant's arguments, insofar as relevant to the decision, may be summarised as follows:

Article 123(2) EPC

- (a) The definition of component e) in claim 1 of the main request had been amended by selecting the preferred hydroxides of bivalent metals and weak acid metal salts without amending their amounts to the corresponding preferred ranges. The application as filed did not provide a basis for that modification.
  
- (b) The experimental section even showed that component e) as amended was not according to the patent in suit as the hydroxide compound  $\text{Ca(OH)}_2$  (calcium hydroxide) present in the compositions of the examples was always disclosed in amounts of 0 or 1 phr, i.e. in amounts corresponding to the preferred range of claim 1 as filed but not in amounts that corresponded to the broader range of 0-2.5 phr as defined in claim 1 of the main request.
  
- (c) Comparative examples 4 and 8 provided a similar teaching. The compositions of these examples contained as component e), 3 phr of calcium hydroxide. That amount could be seen as the rounding of a value comprised anywhere between 2.5 and 3.4, meaning that the compositions of comparative examples 4 and 8 could be seen as containing calcium hydroxide as component e) in an amount of as low as 2.5 phr. The application as filed therefore indicated with comparative examples 4 and 8 that an amount of 2.5 phr was not according to the invention as far as hydroxides of bivalent metals as component e) were concerned. There was thus no basis in the application as filed for the selection of hydroxides of bivalent metals in the range of 0-2.5 phr. Claim 1 of the main request did

not meet the requirements of Article 123(2) EPC.

(d) Besides, claim 1 of the main request additionally limited the definition of component d) to the preferred bivalent metal oxides. Claim 1 of the main request thus resulted from a selection of preferred entities in the two lists of components d) and e) provided in the application as filed.

(e) That selection of specific components d) and e) in combination was nowhere taught in the application as filed, in particular in view of the fact that the choice of any of the remaining components of the claimed compositions, such as components d) and e), had to be made in accordance to the selection of components b) and c) in the composition. In that respect also claim 1 of the main request failed to meet the requirements of Article 123(2) EPC.

X. The respondent's arguments, insofar as relevant to the decision, may be summarised as follows:

Article 123(2) EPC

(a) Component e) in claim 1 of the main request had been amended by selecting the species that were already defined as being preferred in claim 1 of the application as filed. That selection was independent from their amounts in the composition and was thus not in contravention of the requirements of Article 123(2) EPC.

(b) None of the examples provided in the patent in suit was in contradiction with the subject matter defined in claim 1 of the main request.

(c) The amendment performed in claim 1 of the main request was also consistent with the general teachings of the present invention whereas a clear distinction was made among (i) compounds whereas the amount of component e) was comprised in the range of 0 to 2.5 phr, i.e. for embodiments wherein component e) was either absent or present in an amount which is strictly below 2.5 phr, and described in the patent in suit as compounds providing the expected technical effects, and (ii) compounds wherein the amount of component e) was undoubtedly beyond such limit, e.g. 3 phr, failing to deliver the expected technical effects.

(d) With regard to the selection of both components d) and e) in claim 1 of the main request, the basis for that amendment was provided by the fact that the species chosen in claim 1 of the main request were defined as being preferred in claim 1 as originally filed and no lists were defined for the two components. Claim 1 of the main request met therefore the requirements of Article 123(2) EPC.

XI. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

XII. The respondent requested that the appeal be dismissed, or alternatively that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the claims of one of the first to eighth auxiliary requests filed with the reply to the statement of grounds of appeal.



## Reasons for the Decision

1. Article 123(2) EPC
  - 1.1 In the assessment of compliance with Article 123(2) EPC, amendments can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, from the application as originally filed.
  - 1.2 Claim 1 of the application as filed defines fluoroelastomer compositions that comprise inter alia "e) from 0 to 2.5 phr, preferably from 0 to 1.5 phr of one or more basic compounds preferably hydroxides of bivalent metals or of weak acid metal salts".
  - 1.3 The definition of component e) in two parts makes it clear and unambiguous to the reader that the broad range defining the amount of component e) (from 0 to 2.5 phr), because it limits the amount of basic compounds in general, also applies to the range of preferred hydroxides of bivalent metals or of weak acid metal salts in claim 1. Also, the definition of component e) does not limit the preferred hydroxides of bivalent metals or of weak acid metal salts to an amount of 0 to 1.5 phr in the composition.
  - 1.4 The description of the application as filed contains the same wording on page 3, lines 3-5 and there is no other part of the application that limits the presence of hydroxides of bivalent metals or weak acid metal salts in the composition to the range of 0 to 1.5 phr only.
  - 1.5 The appellant however considered that the compositions according to comparative examples 4 and 8 in Tables 1

and 2 of the application as filed showed that compositions containing 2.5 phr of calcium hydroxide, an hydroxide of a bivalent metal, as component e) were not according to the invention. To that extent, the appellant argued that the compositions of these examples, which contained 3 phr of calcium hydroxide were according to the definition given in claim 1 of the main request since the amount of 3 phr would have been understood by the skilled person as including numerical values of from 2.5 to 3.4 before getting rounded to one significant figure.

- 1.6 The application as filed however makes it clear that the amount of 3 phr in calcium hydroxide used in these compositions (see tables 1 and 2) is "higher than 2.5 phr" on page 23, first sentence of the description of the composition prepared in comparative example 8. It is thus manifest from the information provided in comparative example 8 that the amount of 3 phr is outside the claimed range of 0-2.5 phr as now defined in claim 1 of the main request. The argument of the appellant based on comparative examples 4 and 8 fails already for that reason.
- 1.7 The Board therefore finds that the amendment in claim 1 of the main request of feature e) as being "from 0 to 2.5 phr of one or more basic compounds selected from hydroxides of bivalent metals and weak acid metal salts" finds a basis in claim 1 of the application as originally filed.
- 1.8 The appellant also questioned the combination of amendments made to both components d) and e) in claim 1 of the main request. In particular, the appellant considered that claim 1 of the main request resulted from a selection in two lists of compounds disclosed

for each component d) and e) for which there was no basis in the application as filed.

1.9 In that regard, the individual definition for each component was originally present in claim 1 of the application as filed:

"d) from 1 to 40 phr of one or more inorganic acid acceptors, preferably bivalent metal oxides;

e) from 0 to 2.5 phr, preferably from 0 to 1.5 phr of one or more basic compounds preferably hydroxides of bivalent metals or of weak acid metal salts".

1.10 Contrary to the argument made by the appellant, it is apparent from the above that none of the components d) and e) in claim 1 of the application as filed is defined by way of lists. Both components are defined by their functions in the composition, as inorganic acid acceptor for component d) and as basic compound for component e) and are additionally defined by preferred classes of compounds being one or more bivalent metal oxides for component d) and being one or more hydroxides of bivalent metals or of weak acid metal salts for component e) which were chosen to delimit claim 1 of the main request.

1.11 The present situation with regard to the amendments of components d) and e) in claim 1 of the main request is thus not that of a selection within lists but rather corresponds to the amendment of claim 1 by defining both components d) and e) by their preferred classes of compounds.

- 1.12 In that regard, the fact that these two classes of compounds for components d) and e) are disclosed as being preferred in claim 1 of the application as filed serves as a pointer towards their combination and is a reason why that combination emerges unambiguously from that claim alone.
- 1.13 The appellant argued additionally that the amounts and the nature of the other components present in the composition had to be adapted to the selection of the specific classes of compounds as components d) and e) as now defined in claim 1 of the main request and that the necessary information regarding these choices was not part of the application as filed, implying that new technical information had been added to claim 1 for which there was no basis.
- 1.14 That argument was however not supported by any evidence, nor does the application as filed contain any indication that the use of components d) and e) as now defined in claim 1 of the main request would require any adjustment in the preparation of the composition. Under these circumstances, the Board is not in the position to assess which new technical information is supposed to have been added as a result of the amendments performed in claim 1 of the main request and there is no reason to conclude that in that regard claim 1 of the main request does not meet the requirements of Article 123(2) EPC.
- 1.15 The main request thus meets the requirements of Article 123(2) EPC.
2. As there is no reason to overturn the only finding in the decision under appeal that was challenged by the appellant, the appeal is to be dismissed.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



B. ter Heijden

D. Semino

Decision electronically authenticated