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D E C I S I O N
of 30 October 2003

Case Number: T 0988/02 - 3.3.3

Application Number: 98936532.5

Publication Number: 1000116

IPC: C08K 5/092

Language of the proceedings: EN

Title of invention:
High voltage electrical insulation material

Applicant:
RAYCHEM LIMITED

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 84, 113(1), 123(2)
EPC R. 71(2)

Keyword:
"Amendments - added subject-matter (yes)"
"Clarity (no)"
"Conciseness (no)"
"Oral proceedings in appellant's absence"

Decisions cited:
G 0004/92, T 0341/92

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0988/02 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 30 October 2003

Appellant: RAYCHEM LIMITED
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 23 May 2002 refusing European application No. 98936532.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: R. Young
Members: C. Idez
R. Moufang

Summary of Facts and Submissions

I. European patent application No. 98 936 532.5, based on International application No. PCT/GB98/02265, filed on 28 July 1998, claiming a GB priority of 30 July 1997 (GB 9715946), and published under No. WO-A-99/06479 on 11 February 1999 (EP-A-1 000 116), was refused by a decision of the Examining Division issued in writing on 23 May 2002.

II. The decision was based on a set of 21 claims consisting of Claims 1 to 12 as submitted with letter of 26 March 2002 and of Claims 13 to 21 as submitted with letter of 18 January 2001.

Claims 1 to 21 read as follows:

"1. An electrical insulation material which is suitable for high voltage applications, comprising:
(a) a polymeric material, and
(b) an additive incorporated into the polymeric material, the additive comprising a compound of the formula:

$$Rf\text{-}O_2C(CH_2)_xCO_2\text{-}R'f$$

where Rf and R'f are fluorine-substituted aliphatic chains, and x is an integer in the range 9 to 18.

2. The use of a compound of the formula:

$$Rf\text{-}O_2C(CH_2)_xCO_2\text{-}R'f$$

where Rf and R'f are fluorine-substituted aliphatic carbon chains, and x is an integer in the range 9 to 18, as an additive in a polymeric electrical insulation material which is suitable for high voltage applications.

3. A material or use according to claim 1 or 2, in which the additive compound is present in an amount of 0.1 to 5 percent of the mass of the polymeric material.

4. A material or use according to any preceding claim, in which the additive compound is present in an amount of 0.3 to 3 percent of the mass of the polymeric material.

5. A material or use according to any preceding claim, in which the additive compound is present in an amount of 0.5 to 2.5 percent of the mass of the polymeric material.

6. A material or use according to any preceding claim, in which the integer x is at least 10.

7. A material or use according to any preceding claim, in which the integer x is no greater than 17, preferably no greater than 16, more preferably no greater than 15, especially no greater than 14.

8. A material or use according to any preceding claim, in which the integer x is in the range 10 to 14.

9. A material or use according to any preceding claim, in which the integer x is 10.

10. A material or use according to any preceding claim, in which Rf and/or R'f are fluorinated alkyl groups.

11. A material or use according to Claim 10, in which Rf and/or R'f are fluorinated alkyl groups of the formula:

$$CF_3(CF_2)n(CH_2)m-$$

where n is an integer in the range 5 to 11, and m is 0, 1 or 2.

12. A material or use according to Claim 11, in which the additive compound is present as a mixture of compounds in which the integer n is in the range 5 to 11, and m is 2.

13. A material or use according to any preceding claim, in which the polymeric material comprises a polyolefin, an olefin copolymer, a substituted polyolefin, or a substituted olefin copolymer.

14. A material or use according to Claim 13, in which the polymeric material comprises ethylene-vinyl acetate copolymer (EVA).

15. A material or use according to Claim 13, in which the polymeric material comprises linear low-density polyethylene (LLDPE).

16. A material or use according to any one of claims 1 to 12, in which the polymeric material comprises an acrylic rubber, a silicone polymer, an epoxy resin, a polyurethane or a polyether.

17. An article for providing electrical insulation in high voltage applications, the article comprising an electrical insulation material according to any one of claims 1 or 3 to 16.

18. An article to Claim 17, in which the electrical insulation material is crosslinked.

19. An article according to Claim 17 or Claim 18, in which the electrical insulation material is recoverable, preferably heat-recoverable.

20. An article according to any one of claims 17 to 19, in which the electrical insulation material has been moulded or extruded.

21. An article according to any one of claims 17 to 20 which is in the form of a tube."

III. The Examining Division refused the application on the grounds that it did not meet the requirements of Article 84 EPC.

More particularly, the decision stated that the wording "a material or use according to any preceding claims"

in dependent Claims 3 to 16 referred to two categories of claims (i.e. product and use) and that these dependent Claims themselves referred to independent claims (Claims 1 and 2) in two categories (product and use). Thus, it held that each of these dependent claims referred to a product claim and a use claim, and that, therefore, the requirement that the claims should be clear as a whole was not fulfilled, because the multiplicity of variations of claim categories led to a lack of clarity.

IV. A Notice and Statement of Grounds of Appeal against the decision was lodged on 3 July 2002 by the Appellant (Applicant) with simultaneous payment of the prescribed fee.

In the Statement of Grounds of Appeal, the Appellant argued essentially as follows:

(i) Article 84 EPC required the claims to be clear and concise.

(ii) Replacing Claims 3 to 16 by two separate sets of claims, one set for a material dependent on Claim 1, the other for a use dependent on Claim 2 would result in doubling substantially identical claims and therefore in a lack of conciseness contrary to Article 84 EPC.

(iii) The objection of lack of clarity was based on a pedantic approach of the concept of claim categories.

(iv) In view of the disjunctive word "or" used in the expression "method (sic) or use" it was perfectly clear that the reader should take whichever of these alternatives was appropriate for a given sub-claim depending on which aspect of the preceding claims was being considered.

(v) There was no multiplicity of variations of claims categories, but merely two possible categories in Claims 3 to 16.

(vi) The method (sic) alternative of Claims 3 to 16 would not be read onto the use alternative of Claims 3 to 16.

(vii) Thus, the Appellant requested that the "method (sic) or use" claims 3 to 16 should be accepted in the interest of conciseness and considered as clear on any fair reading.

V. With its letter dated 12 May 2003, the Appellant requested that a decision in the present appeal case should be expedited, since the facts were clear and no hearing had been required. This request was justified in order to avoid unnecessary examination of the related divisional application No. 02076474.2.

VI. In a communication dated 22 July 2003 and annexed to a summons to oral proceedings, the Board presented its provisional view concerning the allowability under Article 84 EPC of the set of claims on which the decision of the Examining Division was based.

VII. With its letter dated 25 September 2003, the Appellant submitted an amended Claim 2 in order to replace existing Claim 2 in the set of Claims 1 to 21 on which the decision of the Examining Division was based and a set of 21 claims as auxiliary request.

Independent Claim 2 of the main request reads as follows:

"The use of a compound of the formula:

$$Rf\text{-}O_2C(CH_2)_xCO_2\text{-}R'f$$

where Rf and R'f are fluorine-substituted aliphatic carbon chains, and x is an integer in the range 9 to 18, as an additive to improve the hydrophobicity retention and recovery of a polymeric electrical insulation material which is suitable for high voltage applications."

Claim 1 of the auxiliary request is the same as Claim 1 of the request on which the decision of the Examining Division was based.

Independent Claim 16 reads as follows:

"The use of a compound of the formula:

$$Rf\text{-}O_2C(CH_2)_xCO_2\text{-}R'f$$

where Rf and R'f are fluorine-substituted aliphatic carbon chains, and x is an integer in the range 9 to 18, as an additive to improve the hydrophobicity

retention and recovery of an electrical insulation material according to any preceding claim."

Dependent Claims 2 and 3 read as follows:

"2. A material according to claim 1, in which the additive compound is present in an amount of 0.1 to 5 percent of the mass of the polymeric material.

3. A material according to claim 1 or 2, in which the additive compound is present in an amount of 0.3 to 3 percent of the mass of the polymeric material."

Dependent Claims 4 to 13, and 15 correspond to dependent Claims 5 to 14, and 16 of the set of claims on which the decision of Examining Division was based respectively, apart from the fact, that the expression "or use" has been deleted therefrom.

Dependent Claim 14 reads as follows:

"A material or use according to Claim 12, in which the polymeric material comprises linear low-density polyethylene (LLDPE)."

Independent Claim 17 only differs from independent Claim 17 of the set of Claims on which the decision of the Examining Division in that it makes reference to the material of Claims 1 to 15 instead of that of Claims 1 or 3 to 16.

Dependent Claims 18 to 21 are the same as Claims 18 to 21 of the set of Claims on which the decision of the Examining Division was based.

The Appellant argued essentially as follows:

(i) Concerning the main request:

(i.1) New Claim 2 included the actual act to be performed by the additive, which was "to provide the composition with improved hydrophobicity retention and recovery", and was supported by the first full paragraph on page 4 of the application as filed.

(i.2) The skilled person would understand that the features of material or use according to Claim 3 were to be included in the material when read in the material claim 1 and in the use when read in the use claim 2.

(ii) Concerning the auxiliary request:

(ii.1) Claims 1 to 15 were solely directed to a material and Claim 16 referred to the use of the compound in a product according to Claims 1 to 15.

(ii.2) Thus, this set of claims should be acceptable.

VIII. With a fax dated 28 October 2003, the Appellant informed the Board that it would not attend the oral proceedings scheduled for 30 October 2003.

IX. Oral proceedings were held on the 30 October 2003 in the absence of the Appellant.

X. According to the written submissions, the Appellant requested that the decision under appeal be set aside and the appeal be allowed on the basis of a set of claims consisting of Claims 1, 3 to 12 as submitted with letter of 26 March 2002, of Claim 2 as submitted with letter of 23 September 2003 and of Claims 13 to 21 as submitted with letter of 18 January 2001, or alternatively on the basis of Claims 1 to 21 submitted with letter of 23 September 2003.

Reasons for the Decision

1. The appeal is admissible.

2. *Procedural matters*

2.1 As indicated in Section IX above, the Appellant, although duly summoned, was absent from the oral proceedings held on 30 October 2003.

2.2 According to the Opinion of the Enlarged Board of Appeals G 4/92 (OJ EPO 1994, 149), a decision against a party, which has been duly summoned but fails to appear at oral proceedings, may not be based on facts put forward for the first time during those oral proceedings. However, in the Reasons, point 4, the Enlarged Board also emphasised that, in accordance with Rule 71(2) EPC and in the interests of the proper administration of justice, no party should be able to

delay the issue of a decision by failing to appear at the oral proceedings.

2.3 In decision T 341/92 (OJ EPO 1995, 373), the Board was faced with a new main request containing amended claims and with the information that the patent proprietor would not attend the requested oral proceedings. During these oral proceedings, the question of whether the subject-matter of those amended claims complied with Article 123(3) EPC was taken up for the first time by the Board, which came to the conclusion that the main request failed because of violation of that article. The Board held that the situation differed from that in G 4/92 in that the extension, to which objection had been made, arose solely from a comparison of the wordings of the respective claims according to the granted patent and the main request before the Board, and therefore not from facts that had only been introduced into the case during oral proceedings. At all events, it was possible to base a decision on a ground discussed for the first time during the oral proceedings which would prevent the patent being maintained as amended, at least if the stage reached in the case was such that the absent - albeit duly summoned - patent proprietor could have expected the question to be discussed and was aware from the proceedings to date of the actual basis on which it would be judged (points 2.3.1 to 2.3.4 of the reasons).

2.4 In the present case, in view of the new wordings of the Claims submitted with its letter of 25 September 2003, the Appellant must have expected that the question of their formal admissibility under Article 123(2) EPC and Article 84 EPC would be discussed at the oral

proceedings and was aware from the proceedings to date of the actual basis on which it would be judged.

2.5 The Appellant had reason and opportunity to prepare itself for this eventuality. If it nevertheless preferred not to attend the oral proceedings it failed to take up an opportunity to comment on these grounds for the present decision. Consequently, the requirements of Article 113(1) EPC are satisfied. In accordance with Article 11(3) of the Rules of Procedure of the Boards of Appeal, the Appellant is to be treated as relying only on its written case.

Main request

3. *Wording of the claims*

3.1 Article 123(2) EPC:

3.1.1 The Appellant has submitted in its letter dated 25 September 2003 that support for independent Claim 2 is to be found on page 4, first full paragraph of the application as originally filed.

3.1.2 This passage states that the additive, when incorporated into a polymeric insulation material, "endows the insulation material with dramatically **superior** hydrophobicity retention and recovery, **in comparison with previously used additive compounds**" (emphasis by the Board).

3.1.3 In this connection, while Claim 2 is directed to the use of the specific additive to improve the hydrophobicity retention and recovery of a polymeric

electrical insulation material which is suitable for high voltage applications, it does not mention the reference in respect to which the improvement must be achieved.

3.1.4 In that respect, it is, however, evident that an essential feature of a claim which relates to an improvement is the reference in respect to which the claimed improvement must be achieved.

3.1.5 It thus follows that Claim 2 is not supported by the passage on page 4 of the application as filed mentioned by the Appellant.

3.1.6 Even if the Appellant would have relied on original Claims 4 and 5 as basis for Claim 2, one would also come to the conclusion that these claims could not provide an adequate support for Claim 2 for the following reasons:

(i) While original Claim 4 refers to the extension of the period of **time** during which the polymeric material **retains** its hydrophobicity under **moist conditions during use in high voltage applications** in comparison with the polymeric material if the additive were not present, and

(ii) While original Claim 5 relates to the enhancement and/or the acceleration of the recovery of the hydrophobicity of the polymeric material in **dry conditions** following a reduction in hydrophobicity **in moist conditions during use in high voltage applications** in comparison with the polymeric

material if the additive were not present (again emphasis by the Board),

(iii) Claim 2 is firstly concerned with the **quantitative** variation of the hydrophobicity of the material and not by the period of time of retention thereof;

(iv) secondly it specifies neither the conditions under which this quantitative variation should occur nor the conditions under which the hydrophobicity should be recovered, and

(v) thirdly, in contrast to original Claims 4 and 5, it gives no reference in respect to which the improvement must be achieved.

3.1.7 It thus follows from the above that no adequate support can be found in the application as originally filed for Claim 2, and that it contravenes therefore Article 123(2) EPC.

3.2 Although for this reason alone, the main request as a whole cannot be accepted, the Board deems it appropriate to also deal with considerations under Article 84 EPC, to the extent that this issue was mentioned in the communication of the Board annexed to the summons to oral proceedings.

3.3 Article 84 EPC

3.3.1 According to Article 84 EPC, the claims shall define the matter for which protection is sought (first sentence) and for this purpose they shall, inter alia,

be clear and supported by the description (second sentence). This implies that the claims must be clear in themselves when being read with the normal skills, but not including any knowledge derived from the description of the patent application. In Article 84 EPC, the description is only mentioned in the context of the additional requirement that the claims must be supported by it.

3.3.2 In the present case, a characterizing feature of Claim 2 is the actual act to be performed by the additive i.e. "to improve the hydrophobicity retention and recovery of a polymeric electrical insulation material which is suitable for high voltage applications".

3.3.3 Thus, in order to allow the matter for which protection is sought to be defined, it must be clear which is the reference in respect to which the improvement should be achieved and under which conditions (e.g. humidity, temperature, voltage) this improvement should be achieved.

3.3.4 It is, however, evident that Claim 2 indicates neither the reference nor the conditions. Consequently, Claim 2 is not clear in the sense of Article 84 EPC.

3.3.5 Furthermore, due to the unclear definition of the actual act to be performed by the additive, the use of the specific fluorine compound must be seen as merely amounting to its use as an additive manifesting its inherent properties (i.e. its hydrophobic character due to the presence of fluorine atoms) in a polymeric electrical insulation material.

3.3.6 Consequently, in the Board's view, Claim 2 must be construed as being directed to subject-matter which merely relates to the presence of the fluorine compound according to the application in suit in a polymeric electrical insulation material.

3.3.7 Thus, since Claim 1 relates to a polymeric electrical insulation material comprising such a fluorine compound as an additive into a polymeric material, it covers *de facto* the use and the presence of the fluorine compound as an additive in a polymeric electrical insulation material. It therefore renders Claim 2 superfluous. This leads to a lack of conciseness of the claims as a whole contrary to Article 84 EPC.

4. Summing up, Claim 2 is not allowable under Article 123(2) EPC, and even if the Board had taken a different view in this respect, it would lack clarity and would lead to a lack of conciseness of the claims as a whole contrary to Article 84 EPC.

5. Consequently, the main request must be refused.

Auxiliary request

6. *Wording of the claims*

6.1 Claim 16 of the auxiliary request differs from Claim 2 of the main request only in that it formally refers "to an electrical insulation material according to any preceding claim", i.e. to a polymeric electrical insulation material which is suitable for high voltage application.

6.2 It thus follows that for the same reasons as indicated above for Claim 2, Claim 16 is not allowable under Article 123(2) EPC, and even if it would have been held allowable, it would lack clarity and would lead to a lack of conciseness of the claims as a whole contrary to Article 84 EPC.

6.3 Consequently, the auxiliary request must also be refused.

7. Since neither of the requests of Appellant is allowable, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

E. Görgmaier R. Young