

Internal distribution code:

- (A) [] Publication in OJ
(B) [X] To Chairmen and Members
(C) [] To Chairmen

D E C I S I O N
of 26 September 1995

Case Number: T 0955/92 - 3.3.2

Application Number: 84870179.3

Publication Number: 0146524

IPC: C01B 33/18

Language of the proceedings: EN

Title of invention:
Crystalline silicas

Patentee:
FINA TECHNOLOGY, INC.

Opponents:
Mobil Oil Corporation
Imperial Chemical Industries PLC

Headword:
Crystalline silicas I/FINA

Relevant legal provisions:
EPC Art. 84, 123(2)
EPC R. 88

Keyword:
"Correction of ambiguous expression (not allowed)"
"Amended ranges - not clear - not based on the application as
filed"

Decisions cited:
T 0301/87, G 0003/89

Catchword:
-



Case Number: T 0955/92 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 26 September 1995

Appellant:
(Proprietor of the patent) FINA TECHNOLOGY, INC.
8350 North Central Expressway
Dallas, Texas 75206 (US)

Representative:
Detrait, Jean-Claude
c/o Fina Research S.A.
Patent Department
Zone Industrielle C
B-7181 Feluy (BE)

Respondent:
(Opponent 01) Mobil Oil Corporation
150 East 42nd Street
New York, N.Y. 10017 (US)

Representative:
Cooper, John Anthony
CARPMAELS & RANSFORD
43 Bloomsbury Square
London WC1A 2RA (GB)

Respondent:
(Opponent 02) Imperial Chemical Industries PLC
Imperial Chemical House, Millbank
London SW1P 3JF (GB)

Representative:
Roberts, Jonathan Winstanley
Intellectual Property Department
ICI Chemicals & Polymers Ltd
P.O. Box 11
The Heath
Runcorn
Cheshire WA7 4QE (GB)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 17 August 1992
revoking European patent No. 0 146 524 pursuant to
Article 102(1) EPC.

Composition of the Board:

Chairman: P. A. M. Lançon
Members: G. J. Wassenaar
J. Van Moer

Summary of Facts and Submissions

I. European patent No. 0 146 424 was granted in response to European patent application No. 84 870 179.3.

II. Notices of opposition were filed by the Respondents (Opponents). Revocation of the patent in its entirety was requested on the grounds of lack of novelty, lack of inventive step (Articles 52, 54, 56 and 100(a) EPC) and insufficient disclosure (Articles 83 and 100(b) EPC).

III. The Opposition division revoked the patent. The decision was based on the claims as granted as main request and four new sets of claims as auxiliary requests 1 to 4. They considered that claim 1 as granted (main request) lacked novelty, that claim 1 according to auxiliary request 1 extended beyond the content of the application as filed (Article 123(2) EPC), that auxiliary requests 2 and 3 extended the protection conferred (Article 123(3) EPC) and that claim 1 of auxiliary request 4 lacked clarity within the meaning of Article 84.

IV. The Appellant (Patentee) lodged an appeal against this decision.

With the statement of the grounds of appeal, the Appellant filed four sets of claims as first to fourth auxiliary requests. The main claims of these requests all contained a new limited range for the silica to alumina ratio.

With reference to decision T 301/87, it was argued that the first or second auxiliary request could not be rejected under Article 84 because the alleged deficiency, if any, was already present in claim 1 of the patent as granted. According to the said decision, Article 84 objections can be raised against amended

claims, but only to the extent that such objections arise out of the amendments themselves.

With respect to the amendment in the third and fourth auxiliary request ("with the proviso that $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio and Si/Al atomic ratio are both"), it was pointed out that it had been accepted under Article 123(2) EPC by the Opposition Division in connection with the proceedings in the related European Patent 146 525, and thus no longer needed to be discussed.

- VI. Respondent Mobil Oil disagreed with the Appellant's submissions and maintained that all the new auxiliary requests violated Article 123(2) EPC, that auxiliary requests 1 and 3 also lacked clarity within the meaning of Article 84 and that, because of the ambiguous nature of the expression "silica to alumina atomic ratio", the invention was insufficiently disclosed.

Respondent ICI did not reply to the statement of grounds of the appeal.

- V. During oral proceedings, which were held on 26 September 1995 in the absence of Respondent (C) duly summoned, the Appellant abandoned the claims as granted and considered the set of claims filed as first auxiliary request with the statement of grounds as the main request, with the other requests as auxiliary requests, renumbered 1 to 3. The Appellant also requested a correction under Rule 88 EPC to replace silica and alumina in the claims and description with silicon and aluminium respectively.

The independent claims of the requests on file, which form the basis of this decision, all relate to crystalline silicas, at least defined by a silica to alumina ratio and an X-ray diffraction pattern, the latter being identical to the pattern as given in claim 1 as granted.

The first claims read as follows:

Main request:

Crystalline silicas characterized in that they have a silica to alumina atomic ratio of at least 80 but lower than 200 and the following X-ray diffraction pattern having been obtained by calcination in air for at least 3 hours at a temperature of at least 500°C:

Auxiliary request 1:

Crystalline silicas characterized in that (i) they have a silica to alumina atomic ratio of at least 80 but lower than 200 (ii) they have been obtained by calcination in air for at least 3 hours at a temperature of at least 500°C and (iii) they have the following X-ray diffraction pattern after said calcination:

Auxiliary request 2:

Crystalline silicas characterized in that they have both a $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio and a Si/Al atomic ratio of at least 80 but lower than 200 and the following X-ray diffraction pattern having been obtained by calcination in air for at least 3 hours at a temperature of at least 500°C:

Auxiliary request 3:

Crystalline silicas characterized in that (i) they have both a $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio and a Si/Al atomic ratio of at least 80 but lower than 200 (ii) they have been obtained by calcination in air for at least 3 hours at a temperature of at least 500°C , and (iii) they have the following X-ray diffraction pattern after said calcination:

(diffraction pattern not reproduced).

VI. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of a set of claims according to one of the four auxiliary requests filed on 16 December 1992, with the statement of grounds, renumbered main request and auxiliary requests 1 to 3.

The Appellant further requested a correction under Rule 88 EPC to replace silica and alumina in the claims and description with silicon and aluminium respectively.

Respondent Mobil Oil requested that the appeal be dismissed.

Respondent (C) did not submit any request.

Reasons for the Decision

1. The appeal is admissible.
2. *Correction under Rule 88 EPC.*
 - 2.1 According to the Appellant it was evident that a mistake had taken place since the words silica and alumina

relate to molar species and not to atomic species. He argued that the ambiguous expression "silica to alumina atomic ratio" could only have two meanings, either "silicon to aluminium atomic ratio " or "silica to alumina molar ratio" and that it was evident to a skilled person that the correction could only be as requested since the other interpretation would not be in agreement with the rest of the disclosure for the following reasons:

- (i) The orthorhombic/monoclinic phase transition only takes place if the silicon to aluminium atomic ratio is at least 80 (a silica to alumina molar ratio of 80 would imply a silicon to aluminium atomic ratio of only 40).
- (ii) According to Example 3 a phase transition takes place at a ratio of 130. If the ambiguous expression were to read molar ratio, the atomic ratio of silicon to aluminium would only be 65. Under these conditions a phase transformation could not be observed.
- (iii) Colloidal silica is mentioned as a starting material for the preparation of the claimed crystalline silica. Colloidal silica contains less than 1 wt% alumina, which corresponds with a silica to alumina molar ratio of 168 or a silicon to aluminium atomic ratio of 84. With such a starting composition it would not be possible to obtain a crystalline silica with a silicon to aluminium atomic ratio between 40 and 80. To obtain a crystalline silica with an aluminium content in the latter range the starting silica should contain at least 2 wt%; such a starting product would no longer be called a "silica".

2.2 The Board accepts that a mistake was obvious and that the ambiguous expression can only have one of the two meanings mentioned above. The Board also accepts that after trying to reproduce the teaching of the patent in suit, a person skilled in the art could come to the conclusion that the interpretation according to the correction sought was more likely than the alternative.

According to Rule 88, second sentence, EPC, however, the correction must be obvious in the sense that it is immediately evident that nothing else would have been intended than what is offered as the correction.

Following the interpretation given in the Enlarged Board decision G 3/89 (OJ EPO 1993, 117), the correction should be unambiguously derivable by a skilled person, using common general knowledge, from the description, claims and drawings of the patent application on the date of filing. If there is any doubt that nothing else would have been intended than what is offered as the correction, a correction cannot be made (point 6).

The 3 reasons given by the Appellant to show that only the requested correction could have been intended, are in the Board's opinion not based on the level of general knowledge on the date of filing.

The statement under (i) that no phase transformation is possible below an atomic ratio of 80 could not be supported by the prior art. According to the Appellant, no prior art was available to support his contention because such prior art would then destroy the novelty of the claim.

The statement under (ii) that at an atomic ratio of 65 no phase transformation could have been observed as disclosed in Example 3 was, for the same reason, not apparent on the date of filing.

Reason (iii) presupposes, as admitted by the Appellant himself, that the starting material contains less than 1% by weight of alumina, which is not disclosed.

The Board is, therefore, of the opinion that in order to arrive at the conclusion that the requested correction is the only physically meaningful one, experiments had to be performed, which needed more than common general knowledge and the results thereof would not have been available on the date of filing.

The request for correction, therefore, does not fulfil the requirements of Rule 88 EPC and must be refused.

3. *Main and first auxiliary requests*

Although lack of clarity of claims as granted is not a ground for opposition it should be taken into consideration if the granted claims have been amended as is the case here. The Appellant referred to case law, in particular T 301/87 (OJ EPO 1990, 335), to show that objections under Article 84 EPC can be raised against amended claims offered in the course of opposition proceedings, but only to the extent that such objections arise out of the amendments themselves.

The following considerations of the Board are consistent with this case law.

Claim 1 of the main request, differs from the claims as granted in that a new upper limit for the silica to alumina ratio has been introduced. The upper limit in the claim as granted was clear insofar as it was nonexistent, leaving an open range upwards, irrespective whether the ratio related to atomic or molar ratio. The new upper limit is ambiguous and can have two distinct physical meanings as indicated above under point 2.1.

The ambiguity in the upper limit did not exist in the claims as granted but arises out of the amendment themselves so that amended claim 1 is open for objection under Article 84 EPC.

The introduction of an additional ambiguity renders the claim unclear. As convincingly shown by the Respondent in his letter of 7 August 1995, the cumulation of the 2 interpretations of the ranges as molar and atomic would lead to narrow intervals neither described nor exemplified in the description and incompatible with it. Therefore, claim 1 of the main request violates Article 84 EPC and cannot be accepted.

The same applies for the same reasons to claim 1 of auxiliary request 1.

4. *Second and third auxiliary requests*

The formulation of claims 1 of auxiliary requests 2 and 3 is unusual but resolves the ambiguity with respect to the limits of the range of the silica to alumina ratio. The double meaning of the lower and upper limit of the ratio range results in a silicon to aluminium atomic ratio of from 80 to 100; equivalent to a silica to alumina molar ratio of 160 to 200. This new and very limited range is obtained by combining the figures given in granted claims 1 and 3, which correspond to claims 1 and 3 as originally filed. The lower limit of the range disclosed in granted claim 3 is thereby taken as the higher limit in the amended claim. Such a conversion in meaning of a range limit is normally acceptable under Article 123 (2) EPC because by defining a preferred range the remaining, non-preferred range, is implicitly disclosed as well. In the present case, however, where the disclosed preferred range is ambiguous, the situation is different. Now the remaining, non-preferred

range, has also become ambiguous. The solution of the ambiguity in the definition of the new range is the result of an arithmetical fortuity by mixing the numbers disclosed in granted claims 1 and 3 in a way which was not originally disclosed. Obtained is an artificial claim not based on unambiguously disclosed technical subject matter. A product with a silicon to aluminium atomic ratio within this new range is not disclosed in the description. Whatever meaning is given to the ambiguous atomic ratios mentioned in the Examples, they are either much higher (at least 225 for Example 1) or higher or lower depending on the interpretation (130 or 65 for Example 3).

An essential requirement for allowing amendments under Article 123(2) EPC is that the subject matter resulting from the amendment is not new with respect to the application as filed. Since neither the lower nor the higher limit of the range as defined in claims 1 of auxiliary requests 2 and 3 were unambiguously disclosed in the application as filed, the amended range is a selection which was not originally disclosed, and therefore it defines subject-matter which must be considered as new with respect to the application as filed. The Board, therefore, concludes that said claims 1 do not fulfil the requirements of Article 123(2) EPC.

Since none of the Appellant's requests can be allowed, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

P. Martorana

P. A. M. Lançon