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**Datasheet for the decision
of 18 April 2023**

Case Number: T 0315/20 - 3.3.06

Application Number: 07820270.2

Publication Number: 2064291

IPC: C09C1/00, C09C1/02, C09C1/36,
C09C1/42, C09C1/40, C08G77/18

Language of the proceedings: EN

Title of invention:

FILLERS, PIGMENTS AND MINERAL POWDERS TREATED WITH
ORGANOPOLYSILOXANES

Patent Proprietor:

Dow Silicones Corporation

Opponents:

Evonik Operations GmbH
Omya International AG

Headword:

Polydiorganosiloxane-treated powders/DOW

Relevant legal provisions:

EPC Art. 54, 123(2)
RPBA 2020 Art. 13(2)

Keyword:

Late-filed auxiliary requests

Amendment after summons - exceptional circumstances (no)

Novelty - (no)

Amendments - extension beyond the content of the application
as filed (yes)

Unallowable intermediate generalisation

Decisions cited:

T 0197/08

Catchword:



Beschwerdekammern
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Case Number: T 0315/20 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 18 April 2023

Appellant: Dow Silicones Corporation
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 26 November
2019 revoking European patent No. 2064291
pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman J.-M. Schwaller
Members: S. Arrojo
 C. Brandt

Summary of Facts and Submissions

- I. The present appeal filed by the proprietor contests the decision of the opposition division to revoke European patent No. 2 064 291 for non-compliance with the requirements of Articles 123(2), 123(3), 84 and 54 EPC.
- II. In its statement of grounds of appeal dated 3 April 2020, the appellant filed 18 sets of claims as main and first to seventeenth auxiliary requests. It also requested that document D34 be admitted but that D23-D33 and D35 not be admitted into the appeal proceedings.
- III. Claim 12 of the **main request** reads as follows:

"12. A process for the surface treatment of a filler, pigment or mineral powder with a silicon compound, characterised in that the silicon compound is a polydiorganosiloxane having two or more terminal groups of the formula $-SiR(OR')_2$ or $-Si(OR')_3$, wherein R represents an alkyl, substituted alkyl, alkenyl or aryl group and each R' represents an alkyl group having 1 to 4 carbon atoms, and the surface treating results from chemical bonding and/or coverage via hydrolysis-condensation of the alkoxy groups into a resin-like surface, wherein the filler, pigment or mineral powder is treated with a mixture of the said polydiorganosiloxane and an aminosilane or aminosiloxane."

Claim 1 of **auxiliary request 1** corresponds to claim 12 of the main request.

Claim 12 of **auxiliary request 2** corresponds to that of the main request with the following amendment (highlighted by the board): "*... the filler, pigment or mineral powder is treated with a mixture consisting of the said polydiorganosiloxane and an aminosilane or aminosiloxane.*"

IV. With their replies, opponents 1 and 2 (also respondents) requested that the appeal be dismissed, arguing *inter alia* that claim 1 of auxiliary request 1 (corresponding to claim 12 of the main request) was not novel in view of **D8** (US 4,760,123) and that there was no basis in the application as filed for adding the term "*consisting*". They further requested that documents D23-D33 and D35 be admitted and that document D34 as well as auxiliary requests 2, 5, 7, 9, 11, 13, 15 and 17 not be admitted into the appeal proceedings.

V. In response to the board's preliminary opinion that none of the requests then on file met the requirements of the EPC, the appellant filed on 22 September 2022 auxiliary requests 3 to 21 in replacement to the previously submitted auxiliary requests 3 to 17.

Claim 1 of **auxiliary request 4** corresponds to claim 12 of auxiliary request 2.

Claim 12 of **auxiliary request 6** corresponds to claim 12 of the main request wherein the aminosilane and the aminosiloxane are restricted as follows: "*...the aminosilane is 3- aminopropyltrimethoxysilane, 3- aminopropyltriethoxysilane, (2-aminoethyl)-3- aminopropyltrimethoxysilane or 2-methyl-3- aminopropyltrimethoxysilane and the aminosiloxane is a polydiorganosiloxane terminated with 3- aminopropyldimethoxysilyl groups.*"

Claim 1 of **auxiliary request 8** corresponds to claim 12 of auxiliary request 6.

Claim 12 of **auxiliary request 10** corresponds to claim 12 of the main request with the following deletion (highlighted by the board): "*... characterised in that the silicon compound is a polydiorganosiloxane having two or more terminal groups of the formula $-SiR''(OR')_2$ or ~~$-Si(OR')_3$~~ wherein R''...*".

Claim 1 of **auxiliary request 11** corresponds to claim 12 of auxiliary request 10.

Claim 12 of **auxiliary request 12** corresponds to the combination of claim 12 of auxiliary request 10 and claim 12 of auxiliary request 6. In particular, the aminosilane and the aminosiloxane have been further specified and the alternative " $-Si(OR')_3$ " for the terminal group of the polydiorganosiloxane has been deleted.

Claim 1 of **auxiliary request 13** corresponds to claim 12 of auxiliary request 12.

Claim 12 of **auxiliary request 14** corresponds to claim 12 of the main request with the following deletion (highlighted by the board): "*...wherein R'' represents an alkyl, ~~substituted alkyl~~, alkenyl or aryl group...*".

Claim 1 of **auxiliary request 15** corresponds to claim 12 of auxiliary request 14.

Claim 12 of **auxiliary request 16** corresponds to a combination of the claims 12 of auxiliary requests 14 and 6. In particular, the aminosilane and the

aminosiloxane have been further specified and the alternative "*substituted alkyl*" for R" deleted.

Claim 1 of **auxiliary request 17** corresponds to claim 12 of auxiliary request 16.

Claim 12 of **auxiliary request 18** corresponds to a combination of the claims 12 of auxiliary requests 10 and 14. In particular, the alternatives "*substituted alkyl*" and "*-Si(OR')₃*" have been deleted.

Claim 1 of **auxiliary request 19** corresponds to claim 12 of auxiliary request 18.

Claim 12 of **auxiliary request 20** corresponds to a combination of the claims 12 of auxiliary requests 18 and 6. In particular, the aminosilane and the aminosiloxane have been further specified and the alternatives "*substituted alkyl*" and "*-Si(OR')₃*" deleted.

Claim 1 of **auxiliary request 21** corresponds to claim 12 of auxiliary request 20.

VI. At the oral proceedings, which took place on 18 April 2023, the parties confirmed that the decision should be based on the following requests:

The proprietor-appellant requests that the decision under appeal be set aside and the patent be maintained on the basis of one of the sets of claims according to the main request or to auxiliary requests 1-2 filed with the statement of grounds of appeal on 3 April 2020, or to auxiliary requests 3 to 21 filed on 22 September 2022.

The opponents-respondents requested that the appeal be dismissed.

Reasons for the Decision

1. Main request - Novelty

The board has concluded that the requirements of Article 54 EPC are not met for the following reasons:

- 1.1 The invention concerns a process and the product obtained therefrom for the surface treatment (i.e. hydrophobising) of a filler, pigment or mineral powder, carried out by bringing the latter in contact with a mixture of a polydiorganosiloxane having two or more terminal groups of the formula $-\text{SiR}''(\text{OR}')_2$ or $-\text{Si}(\text{OR}')_3$, and an aminosilane or aminosiloxane.
- 1.2 Document D8 discloses (example 1) a process in which a component B-1 including α - ω -bis(methyldimethoxysilyl) polydimethylsiloxane (i.e. a polydiorganosiloxane with two terminal groups in the sense of claim 1) and fumed silica (a filler in the sense of claim 1) is mixed with a crosslinking component C-1 containing aminosilanes (i.e. γ -aminopropyl-triethoxysilane, N-trimethylsilyl- γ -aminopropyltriethoxysilane, etc.) and a catalyst (stannous laureate), and with a component A-1. The mixture is then exposed to air moisture in order to promote hydrolysis/condensation curing reactions of the polymers to form a resin.
- 1.3 The appellant argued that the above process did not anticipate the subject-matter of claim 12 of the main request because the polydiorganosiloxane described in example 1 of D8 would react with the fumed silica in

component B-1 before being mixed with the aminosilanes in component C-1, since both the methoxy groups and the viscosity of 20000 cP implied that this polymer was very reactive. While this example also indicated that moisture was excluded, fumed silica by its own nature would rapidly adsorb moisture from the environment in the form of a layer, thus enabling the hydrolysis/condensation reaction of the functional end groups of the polydiorganosiloxane.

Consequently, at least one of the terminal groups of the polydiorganosiloxane in example 1 would react with the fumed silica in the component B-1 before the aminosilane-containing component C-1 was added to the mixture. The polydiorganosiloxane of D8 would therefore only have one terminal group when the mixture with the aminosilanes was made, so example 1 did not directly and unambiguously anticipate a surface treatment of the silica with a mixture including a polydiorganosiloxane having at least two terminal groups as defined in claim 12 at issue.

- 1.4 The board disagrees with this argumentation because example 1 of D8 directly and unambiguously discloses forming a mixture with a component B-1 containing a fumed silica filler and a polydiorganosiloxane with two terminal groups and a component C-1 including aminosilanes and stannous laureate. The mixture is then cured through hydrolysis-condensation reactions of the methoxy groups in the presence of air moisture and the stannous laureate in component C-1 acting as catalyst. This process then leads to a resin structure formed by cross-linked polydiorganosiloxane chains with dispersed silica particles, i.e. the filler particles are covered by or covalently bonded to polydiorganosiloxane chains in a resin structure as defined in claim 12 at issue.

The object of the invention in D8 is to obtain polyorganosiloxane compositions having good storage stability under sealed conditions, i.e. which cure only once they are unsealed and contacted with air moisture (see col. 1, lines 9-14; col. 8, lines 41-49). This requirement is also expressed in example 1, which explicitly states that moisture was excluded until the mixture of components A-1, B-1 and C-1 became homogeneous (see col. 9, lines 58-59). It is thus apparent that component B-1 of example 1 and therefore also the fumed silica therein should not contain any moisture. The fact that silica spontaneously and rapidly adsorbs water from the environment does not imply that this substance cannot be provided in dry form, as this merely requires maintaining the silica in a dry sealed storage and/or hydrophobising its surface.

Although methoxy groups are more reactive than other alkoxy groups, as argued by the proprietor, the hydrolysis-condensation reaction still requires the presence of moisture as well as a catalyst and/or a relatively high temperature. In example 1 of D8 the components are however kept under sealed conditions with no moisture, and the stannous laureate acting as catalyst is added with component C-1 together with the aminosilanes. It follows that the curing reactions are thus prevented when B-1 is formed and even when B-1 and C-1 are mixed by keeping the mixture in a sealed container free of moisture (see col. 8, lines 45-49). The board has therefore concluded that the terminal groups of the polydiorganosiloxane in component B-1 will remain stable and unreacted until all the components A-1, B-1 and C-1 are mixed and exposed to moisture.

And even assuming for the sake of argument that the polydiorganosiloxane and the fumed silica in component B-1 reacts to a certain extent (e.g. due to the presence of residual moisture), there is no technical basis for concluding that such reaction would affect the entire amount of polydiorganosiloxane in component B-1, since this polymer is intended to undergo a cross-linking curing reaction to form the backbone of the resin structure, an essential role which would be compromised if at least one of the terminal groups of all the polydiorganosiloxane chains reacted with the silica before the curing reaction begins. This also explains why, as the opponents argued, the polydiorganosiloxane is provided in a large excess (i.e. 100 parts) to all other components of the mixture, including the fumed silica (i.e. 14 parts). The board thus concludes that, even if the polydiorganosiloxane reacted to a certain extent, the mixture in example 1 would still contain some unreacted polydiorganosiloxane when the aminosilanes are added. Since claim 12 does not define the concentration of the polydiorganosiloxane with two terminal groups, the presence of any amount of this substance in the final mixture suffices to anticipate the invention.

In view of the above, the board concludes that the process of example 1 in D8 anticipates the subject-matter of claim 12, which is therefore not novel.

2. Auxiliary request 1 - Novelty

Claim 1 of this request corresponds to claim 12 of the main request, so the arguments and conclusions presented for the main request also apply. The requirements of Article 54 EPC are therefore not met,

because the subject-matter of claim 1 at issue is not novel in view of example 1 of D8.

3. Auxiliary request 2 - Article 123(2) EPC

3.1 The subject-matter of claim 12 of this request is based on a combination of claims 12 and 13 as filed with the following amendments (highlighted by the board):

"12. A process for the surface treatment of a filler, pigment or mineral powder with a silicon compound, characterised in that the silicon compound is a polydiorganosiloxane having ~~at least one~~ two or more terminal groups of the formula $-SiR''(OR')_2$ or $-Si(OR')_3$, wherein R'' represents an alkyl, substituted alkyl, alkenyl or aryl group and each R' represents an alkyl group having 1 to 4 carbon atoms, and the surface treating results from chemical bonding or coverage via hydrolysis-condensation of the alkoxy groups into a resin-like surface, wherein the filler, pigment or mineral powder is treated with a mixture consisting of the said polydiorganosiloxane and an aminosilane or aminosiloxane."

3.2 According to the appellant, the indication that the polydiorganosiloxane has "two or more" terminal groups and the explanation of the reactions associated with the surface treatment (i.e. "and the surface treating results...") were based on par. [0019] of the application as filed.

As regards the expression "consisting of", this was based on the claims as filed as no other substance was defined in the process claims. This expression was also supported by the examples in paras. [0039], [0040] [0045] as filed, as well as the passage on page 6,

lines 1-4 (end of paragraph [0015]) of the description as filed. In particular, the cited examples referred to the use of a mixture consisting of an aminosilane and a polydiorganosiloxane, and the passage on page 6 described the blend as comprising at least 50 wt.-% of the polydiorganosiloxane and up to 50 wt.-% of the aminosilane.

While some other secondary, trace or non-active substances could be present in the mixture, the skilled person understood that the expression "*consisting of*" implied that the aminosilane/aminosiloxane and the polydiorganosiloxane were the only active substances in the mixture. This was in line with established case law (see for example T 197/08 cited in the Case Law book, II E.1.6.2), which concluded that an active ingredient taken from a list of alternatives could be defined as the "sole active ingredient" in the claim even if it was used as part of a mixture with other non-active ingredients, because the skilled person would understand that only the active ingredients were relevant.

3.3 The board disagrees for the following reasons:

3.3.1 Claims 12 and 13 as filed do not provide a basis for defining a mixture consisting of the aminosilane/aminosiloxane and the polydiorganosiloxane, because the omission of other components cannot be regarded as a direct and unambiguous indication that other substances are excluded.

3.3.2 The examples in the application as filed do also not provide a clear basis for the expression "*consisting of*". First of all, most of the examples (e.g. paras. [0035] to [0038], [0041] to [0044] and [0046]-[0047])

use a titanium n-butoxide catalyst, so the possibility of treating the surface with a mixture formed only by an aminosilane/aminosiloxane and a polydiorganosiloxane appears to be restricted to specific substances, which are not defined in claim 12 at issue. Moreover, as pointed out by the opponents, none of the examples discloses a mixture consisting of a polydiorganosiloxane and an aminosiloxane, so there is no basis for a mixture with aminosiloxane (instead of aminosilane). In any case, it is not even clear that said examples propose using a mixture as defined in claim 12 for treating the filler, as the mixtures are formed solely for the purpose of preparing the functionalised polydiorganosiloxane and not to treat the filler. The actual treatments are said to be carried out (see par. [0053] as filed) by contacting the calcium carbonate with 1% of each of the materials A1 to A13 (which correspond to the functionalised polydiorganosiloxane and not to the blend resulting from the reaction with the aminosilane), with no reference being made to the presence of the unreacted aminosilane or aminosiloxane.

- 3.3.3 The information in par. [0015] as filed does also not provide a basis for defining a surface treatment with a mixture consisting of an aminosilane/aminosiloxane and a polydiorganosiloxane. The disclosure of a mixture comprising at least 50 wt.-% of a polydiorganosiloxane and up to 50 wt.-% of an aminosilane can only provide a basis for a mixture having 50 wt.-% of each substance. Claim 1 does however not define the concentration of these substances in the mixture and, as argued by the opponents, it is not even clear whether this would be allowable under Article 123(2) EPC, considering that it would require two selections of the specific values of 50 wt.-% from the ranges disclosed in par. [0015].

Par. [0015] further indicates that the product of the reaction between the aminosilane and the polydiorganosiloxane may be a blend which is effective as a hydrophobing agent for fillers. In a specific embodiment, an aminosilane is used as the only reagent and also as the catalyst to produce the functionalised polydiorganosiloxane. In the board's view, this embodiment represents the most promising alternative for supporting the expression "*consisting of*", because it is the only part of the description which refers to the treatment of the filler with a mixture which does not require any further active ingredient.

This embodiment is however inextricably linked to a number of features which are omitted in claim 12 at issue. The underlying idea is namely that the formation of the functionalised polydiorganosiloxane can take place by reacting the polymer with a substance used both as the sole reagent and as the catalyst. The resulting mixture, including the unreacted reagent/catalyst, can be used to treat the filler without the need to separate the polydiorganosiloxane. Since the only substance which is said to act as the sole reagent and catalyst is an aminosilane of the formula $R''Si(OR')_3$, there is no basis in the application as filed for embodiments in which an aminosilane having a different formula or else an aminosiloxane is part of the mixture. Moreover, it is apparent that the double function of the aminosilane in the process as the sole reagent and catalyst is inextricably linked to the expression "*consisting of*", as it is precisely this double function which renders the presence of other substances in the mixture unnecessary. Furthermore, since according to the explanations in par. [0015], the aminosilane of formula $R''Si(OR')_3$ is the sole reagent leading to the formation of terminal groups

$-\text{SiR}''(\text{OR}')_2$ in the polydiorganosiloxane, and the aminosilane in the mixture corresponds to the unreacted portion of this substance, there is no basis for a process leading to a polydiorganosiloxane with terminal groups of formula $-\text{Si}(\text{OR}')_3$ or $-\text{SiR}''(\text{OR}')_2$ with R'' different from an aminoalkyl, or for a process in which the aminosilane does not correspond to the unreacted portion of this substance, for which it would also be necessary to define the reaction between the aminosilane and the polydiorganosiloxane.

3.3.4 Therefore the board considers that at least the omission of the following features or restrictions in claim 12 at issue leads to an unallowable intermediate generalisation of the information in the application as filed:

- (a) the specification that the aminosilane is of the formula $\text{R}''\text{Si}(\text{OR}')_3$;
- (b) the indication that the terminal groups of the polydiorganosiloxane are obtained from the reaction of the polydiorganosiloxane with the aminosilane;
- (c) the indication that the aminosilane also acts as catalyst;
- (d) the indication that the aminosilane reacts with the polydiorganosiloxane to provide the functionalised polydiorganosiloxane, and that the aminosilane in the mixture is the unreacted portion from this reaction;
- (e) the specification that the terminal groups of the polydiorganosiloxane are of the formula $-\text{SiR}''(\text{OR}')_2$ (not $-\text{Si}(\text{OR}')_3$) with R'' being aminoalkyl; and
- (f) the deletion of aminosiloxane as an alternative in the mixture.

3.4 It follows from the above considerations that the subject-matter of claim 12 at issue extends beyond the

content of the application as filed, contrary to Article 123(2) EPC.

3.5 In view of this conclusion, there is no need to address the additional issues under Article 123(2) EPC, such as the question of whether the presence in the mixture of other secondary substances or reaction products would imply that this mixture does not consist of an aminosilane and a polydiorganosiloxane. Since the case law cited by the appellant was submitted in response to these arguments, there is also no need to discuss this question.

4. Auxiliary requests 3, 5, 7 and 9 - Admittance

4.1 These requests were filed in response to the board's preliminary opinion and after the summoning to oral proceedings, so their admittance is governed by Article 13(2) RBPA, which stipulates that any amendment to a party's appeal case at this late stage should not be admitted unless there are exceptional circumstances justified by cogent reasons.

4.2 The appellant argued that the requests were filed in response to the board's objections against auxiliary requests 2 and 3 as filed with the grounds of appeal, some of which were based on new arguments and objections, such as the reference to the omission of the role/function of the aminosilane/aminosiloxane in the argumentation under Article 123(2) EPC, or the clarity objections.

4.3 The board disagrees that the reference to the omission of the role of the aminosilane/aminosiloxane in the claims represents an exceptional circumstance which justifies the filing of new requests, since the

argument that the expression "*consisting of*" represents an intermediate generalisation of the information in the description was part of the appealed decision (see points 8.4 to 8.7). Moreover, in the reply of opponent 2 this objection was addressed in more detail (see points D.24 to 26), indicating that there was no basis in the examples of the description as filed for mixtures including aminosiloxanes and that par. [0015] only disclosed ranges but did not provide a basis for defining a mixture consisting of an aminosilane/ aminosiloxane and a polydiorganosiloxane.

- 4.4 The objection under Article 123(2) EPC, as presented by the board, was simply a more detailed version of the objections presented in the decision and by opponent 2. More specifically, the board developed the above arguments by pointing out some of the aspects which, in its view, appeared to be inextricably linked to those embodiments which could be seen as the most promising basis for the expression "*consisting of*" in the examples or in par. [0015] as filed. This does not qualify as a new objection or even as a new argument, but simply as a further development of the intermediate generalisation objection raised by the opposition division. In fact by going deeper into the contents of the cited passages, the board simply tried to present the appellant's argumentation in the best possible light in order to explain why it could not be followed.

In any case, the provision of further details and explanations to develop an objection cannot represent an exceptional circumstance in the sense of Article 13(2) RPBA, because such elaboration is an ordinary and common part of the preliminary opinion and the ensuing discussion at the oral proceedings. Most importantly, unless the original objection was so broad or unclear

that it could not be properly understood, a more detailed and thorough examination of the objection does not change the subject-matter of the proceedings.

4.5 Moreover, since the present decision not to allow auxiliary requests 2 and 3 is not based on the (allegedly) new clarity objection, the filing of the new requests cannot be justified by the preliminary opinion of the board that these requests were unclear.

4.6 In the absence of an exceptional circumstance which could justify the filing of the new requests, the board concludes that auxiliary requests 3, 5, 7 and 9 should not be admitted under Article 13(2) RPBA.

5. Auxiliary request 4 - Article 123(2) EPC

Since claim 1 of this request corresponds to claim 12 of auxiliary request 2, the same arguments and conclusions presented in point 3. above apply. The subject-matter of claim 1 therefore extends beyond the content of the application as filed, so this request does not meet the requirements of Article 123(2) EPC.

6. Auxiliary requests 6 and 8 - Article 123(2) EPC

6.1 Claim 12 of **auxiliary request 6** further specifies the aminosilane and the aminosiloxane used in the process.

6.2 The further definition of the aminosilane and the aminosiloxane only overcomes part of the objections under Article 123(2) EPC raised in point 3. above. In particular, while the specification of the aminosilane overcomes the omission (a) in point 3.3.4 above, all the omissions (b) to (f) still apply, so the amendments are still based on an unallowable intermediate

generalisation of the information in the application as filed. The subject-matter of claim 12 at issue therefore extends beyond the content of the application as filed.

6.3 Claim 1 of **auxiliary request 8** corresponds to claim 12 of auxiliary request 6, so its subject-matter also extends beyond the content of the application as filed.

6.4 It follows that auxiliary requests 6 and 8 do not meet the requirements of Article 123(2) EPC.

7. Auxiliary requests 10 to 21 - Novelty

7.1 Claim 12 of **auxiliary request 10** corresponds to claim 12 of the main request with the following amendment (highlighted by the board): "*... characterised in that the silicon compound is a polydiorganosiloxane having two or more terminal groups of the formula $-SiR''(OR')_2$ or ~~$-Si(OR')_3$~~ wherein R'' ...*".

This amendment does not overcome the novelty objections in view of example 1 of D8, because the terminal groups of the polydiorganosiloxane (i.e. methyl dimethoxysilyl) fall within the formula $-SiR''(OR')_2$ wherein R'' and R' are methyl (i.e. an alkyl group having 1 carbon atom). Thus the same arguments and conclusion presented for the main request apply to this request, which does therefore not meet the requirements of Article 54 EPC.

7.2 Claim 1 of **auxiliary request 11** corresponds to claim 12 of auxiliary request 10, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.

- 7.3 Claim 12 of **auxiliary request 12** corresponds to claim 12 of auxiliary request 10 wherein the formula of the aminosilane is further specified. One of the alternatives defined for the aminosilane being 3-aminopropyltriethoxysilane, i.e. one of the aminosilanes in component C-1 of example 1 in D8, the amendment to claim 12 at issue does not overcome the novelty objections in view of D8, so this request does not meet the requirements of Article 54 EPC.
- 7.4 Claim 1 of **auxiliary request 13** corresponds to claim 12 of auxiliary request 12, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
- 7.5 Claim 12 of **auxiliary request 14** corresponds to claim 12 of the main request wherein the option of R" being a substituted alkyl has been deleted. Since, as indicated above, R" in example 1 of D8 is an unsubstituted alkyl, the novelty objections still apply. This request does therefore not meet the requirements of Article 54 EPC.
- 7.6 Claim 1 of **auxiliary request 15** corresponds to claim 12 of auxiliary request 14, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
- 7.7 Claim 12 of **auxiliary request 16** corresponds to claim 12 of auxiliary request 14 wherein the formula of the aminosilane is further specified as in claim 12 of auxiliary request 12. Since, as indicated above, one of the alternatives for the aminosilane is described in example 1 of D8, the amendment does not overcome the novelty objections. This request does therefore not meet the requirements of Article 54 EPC.

- 7.8 Claim 1 of **auxiliary request 17** corresponds to claim 12 of auxiliary request 16, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
- 7.9 Claim 12 of **auxiliary request 18** corresponds to a combination of claims 12 of auxiliary request 10 and 14, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
- 7.10 Claim 1 of **auxiliary request 19** corresponds to claim 12 of auxiliary request 18, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
- 7.11 Claim 12 of **auxiliary request 20** corresponds to a combination of claims 12 of auxiliary request 18 and 6, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
- 7.12 Claim 1 of **auxiliary request 21** corresponds to claim 12 of auxiliary request 20, so it is also not novel in view of example 1 of D8. This request does therefore not meet the requirements of Article 54 EPC.
8. Since none of the requests submitted by the appellant is admissible and allowable, the board concludes that the appeal is to be dismissed. In view of this conclusion, there is no need to address the additional objections from the opponents or the admittance of documents D23 to D35, as these are not relevant for the questions dealt with in the present decision.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



A. Pinna

J.-M. Schwaller

Decision electronically authenticated